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A. Edward Stuntz

NEW YORK · THE MACMILLAN COMPANY

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First Printing

PRINTED IN THE UNITED STATES OF AMERICA

To My Father

John Edward Stuntz

He, too, always leaves behind more than he takes away

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CHAPTER

1

THE BORDER:

Common Ground for Good Living

I WAS about ten paces behind Pep, ready to step off the escalator to the lower level of Washington's Union Station, when the big green locomotive of the waiting New Orleans train seemed to explode in our faces.

The boy and my heavy flight bag disappeared in a cloud of steam. They appeared next at the far edge of the platform. The locomotive resumed normal puffing and snorting, with a steamy chuckle thrown in here and there.

Young Pep, a vibrant ten, was okay. He was rubbing his ears and standing so close to the far edge of the platform that a northbound train would have wiped both boy and flight bag out of the picture. He was shouting at a fireman who leaned limply on the sill of the green engine's cab. The fireman was all right, too. In a second all of us were laughing, particularly the fireman who had taken Pep's sudden and overburdened presence at the escalator exit as a signal to blow the water out of his injection valves. My wife, Consuelo, looking like an anxious though fully clothed Goya model, staggered through the steam with typewriter and brief case. She joined in.

"Man, man," drawled the fireman, "that's the fastest' movin' boy I ever did see! Where's he going with all that bag?"

There was just time to indicate that bag and boy were ours as we lit out for the Pullman section down the platform.

It was as good as a parting can be.

The train slid across the Potomac and I was on my way to the Texas border and the new world to the south. I took the green plastic slicker which was bought against the widely advertised rainy seasons of some of the other American republics, and shook some of Washington's midnight downpour into the aisle. Then I strapped it on the outside of my flight bag for handy use. The slicker stayed in that position through almost seven months of travel. I used it three times; once in Mexico City when it stopped threatening and actually rained, once along the upper Amazon, and once in Costa Rica when I had to walk through a brief autumnal deluge from hotel to ticket office.

As I drew the straps of the flight bag taut I realized that my arms were still sore from injections and vaccinations against various things. In my wallet, ready for official scrutiny, was the Pan American Sanitary Bureau Form No. 6—the celebrated “yellow certificate”—proving that I had taken the proper precautions against smallpox, tetanus, typhoid, typhus, and yellow fever. My passport was smeared with all the necessary visas. In the flight bag were a heavy tweed suit, an all-purpose blue serge, a Palm Beach coat and trousers, a pair of gray flannels, an armless pullover sweater, some khaki trousers, and one pair each of black and tan oxfords. My shirts were a motley array of wartime civilian pickings running to civilian blues and whites, and some military shirts with their useful shoulder straps. I was to find that a light overcoat, a sweater with sleeves, and some long underwear would have been serviceable.

I had a small Zeiss-Ikon camera, its German trademark an unfailing invitation to wisecracks. I had several dozen rolls of film. Later I found that these aroused suspicion at some national crossing points and could cause delay and annoyance.

A portable typewriter and a canvas brief case which could double as an overnight bag completed my traveling kit. I had been generous with oil on everything—neats-foot for the leather and uncooked linseed for the canvas. Piled on the scales the whole assortment tipped the beam just under fifty-five pounds, or the usual “excess” baggage mark for airplane travel.

But better than all this material preparation, I was going out on a trip that would permit me to take firsthand notes on the

work of the Institute of Inter-American Affairs and the Inter-American Educational Foundation. These government corporations were working under the Department of State to apply the Good Neighbor policy in active cooperative programs.

Looking back over fourteen years of duty as a foreign correspondent for the Associated Press, and four years of wartime information work with Nelson Rockefeller's Office of Inter-American Affairs, I could remember no more agreeable activity. I was going to visit countries I had wanted to know at first hand through twenty years of reporting on matters of special interest to the American republics from Havana, Washington, New York, Madrid, Rome, Paris, and Geneva. I was to have the opportunity of adding intimate knowledge of the programs to the tons of informational stuff available in the Washington offices of these corporations. I was to deal with actualities, not political rumor and subterfuge. And, being at the source of the news I could not be scooped.

What better assignment could there be for a newspaperman! I drifted off to the click of the wheels regretful only that I couldn't take Connie and the older of our four children with me. This was early June of 1946, and our family had been reunited for only two months following the war years.

Three nights and three days later I got off a train at El Paso, Texas, in the same mood of anticipation. My brief case was jammed with informational data, together with statistical and technical material which explained the why and wherefore of the Inter-American cooperative programs in health and sanitation, food supply, transportation, and elementary and rural education. I had quotable material from Nelson Rockefeller and Major General George C. Dunham, fathers of the programs, material which soundly established the worth of the programs both as to their human or intrinsic, and economic values.

But there was one question about them I could not answer with assurance, certainly not in my own words and to the average layman. It was a question asked frequently by newspapermen, civic groups, schools and colleges, business houses and private individuals. It was: "How do these things work?" The question stumped me.

So I started at the Mexican-United States Border to dig for the answer. And right there I learned that I was *not* dealing with the obvious.

With elbows propped on the pipe rail of the principal El Paso-Ciudad Juárez International Bridge and one heel hooked on the lower guard, I leaned back and watched a heterogeneous flow of humanity pass in opposing currents through the control gates. I was with Major James A. Grider, Jr., surgeon in the United States Public Health Service, chief of the El Paso Office of the Pan American Sanitary Bureau, and secretary of the United States-Mexican Border Public Health Association. His titles failing to stiffen him, Grider also lounged at the rail.

We were at the Ciudad Juárez end of the bridge. Below us the thin river moved petulantly through its bed of rock and sand. We were watching the human stream flowing across the bridge itself, in streetcars, busses, automobiles, and to a much greater extent, afoot. The people, moving in and out of the customs, immigration, and other barriers in unhurried hundreds, were Mexican business men, workmen, women, girl stenographers, and school children, commuting back and forth across the bridge. There were many United States soldiers, their khaki so common as to be inconspicuous. And there were the tourists in slacks, with cameras, and with that blend of self-consciousness, uncertainty, and the "who the hell cares" attitude which marks the tourist everywhere.

The striking thing to me was that the opposing streams were identical. Radically different El Paso and Ciudad Juárez—the one with its conventional American porched dwellings and lofty downtown buildings, the other with its inside patio mansions and humbler 'dobe abodes, seemed to be spouting the same people back and forth at each other. I had already noted that Mexican commuters in El Paso made that city bilingual. And if there were any time during the waking hours—there are almost twenty-four of them in Ciudad Juárez—when the streets were free of Americans, I failed to note it.

I looked at Grider questioningly. If there were any kind of health control at the bridge I could see no evidences of it.

All morning, with the aid of official data and with his professional reserve accented by his own shyness, this light, war-battered doctor had been trying to tell me about the job of keeping the Mexican-United States Border healthy. His patience was inexhaustible.

To begin with, there was the confusing question of who was doing what with whom? Grider himself was a walking example of a man serving many masters. At the time he was not even sure whether his status was that of a regularly inscribed officer of the United States Public Health Service, his prewar outfit, or whether he was still with the Army of the United States, which had claimed him in time to have him taken prisoner with General Wainwright's forces at Bataan. Then, too, in addition to all the titles with which I introduced him to these pages, Jim was working in Mexico with the cooperative health service of the Institute of Inter-American Affairs, to assure its smooth collaboration with the Border Health Association.

All morning the temptation had been to demand—"just who is your real boss?" However, you do not talk that way to a man with prison camp pain still in his eyes, even though the eyes are an uncomplaining brown, and even though the young fellow's Kentucky drawl is self-depreciatory, his bearing unassuming. At least I don't.

Jim was not one whit worried about this apparent confusion. Knowing the working pattern of border health protection, he was determined that I should grasp it, too. Little by little he got me to relegate the cooperating agencies mentioned above to their proper places as supporting forces in a piece of international teamwork which has produced a generally better health situation where the people of two republics meet face to face daily.

The Border Health Association, Jim explained, was made up of more than one thousand federal, state, county, municipal, and private health practitioners, civic organizations, schools, and churches, on either side of a frontier demarcation which extends from California to the Gulf of Mexico. He spoke of it with quiet enthusiasm. I began to see how the teamwork of all these people and institutions would have a controlling effect on border disease. I could understand how attention to detail, which is the distin-

guishing mark of a good public health officer, would set up a fruitful interchange of information on communicable disease trends along the whole length of the border, provided the association had a central communications bureau.

The central communications bureau, Jim assured me, was part of his job. As a result of the way he was handling it while I was on the border, reports on a poliomyelitis outbreak in San Antonio, along with details of control measures, were available at border points in Mexico as quickly as they were in other Texas cities.

This gave me my first taste of what we came to call "health control in depth." One of the early proposals of Doctor Gustavo Viniegra Osorio, Mexican Director General of Health in States and Territories, was that the Mexican-United States Border should become a zone of free interchange of information. Thus, while I was on the border, the reports on the San Antonio outbreak were being correlated and sent to the chief of epidemiology in Mexico City, there to be translated into Spanish and disseminated to public health authorities throughout the republic. At the same time these reports were being sent to the United States Surgeon General's office and Pan American Sanitary Bureau in Washington. Dr. Clark H. Yeager, chief of the Medical Section of the Institute of Inter-American Affairs, was receiving them also, his main interest lying in the desirability of keeping medical officers of the cooperative services in Mexico and the other American republics abreast of findings in San Antonio. As Jim explained all this to me I could see how the ready cooperation of the agencies mentioned would make it possible for the Border Health Association to keep right on top of communicable disease situations in any part of the United States or Mexico which might affect either country. With up-to-the-minute information in hand the association could then make sensible recommendations as to quarantines, the by-passing of certain areas by travelers intending to cross the border, and the turning back of travelers from epidemic areas if that seemed necessary. This meant that the mutual health precautions of Mexico and the United States extended deep into each other's territory, far beyond the geographical area from the Pacific to the Gulf of Mexico, which is vaguely defined as the "border region."

And another important feature of the border setup was that through the cooperating agencies at the border, lessons in mutual disease control measures learned there would become the common property of all the American republics and Canada.

Another part of Jim's job involved the task of watching venereal disease developments on both sides of the border and coordinating the information and recommended procedures for the Border Health Association and the cooperating agencies. This was a job requiring tact as well as some of the more blunt forms of medical honesty. I realized just how delicate this task might become in a later conversation with an official of an El Paso civic organization. Carefully checked data had indicated to United States Army authorities that only a small percentage of venereal disease contracted by servicemen on the border came from across the Rio Grande. Wartime controls, cordially supported by Mexican authorities, were such that our service people were forced to look in their own backyard for the social sore spots. To my civic organization official the idea that any venereal disease was originating in Texas was "just a plain damn' lie," fostered by "a lot of know nothin' damn' fools in Washington because they think it will please the Mexicans."

As Jim talked, it all began to add up. I could see the Rio Grande with its crossing points spotted across the map from Nogales to Brownsville as on the road to becoming safe places for work and play, rather than focal points for disease. Through him I learned something of the character of Dr. Gustavo Rovirosa of Mexico, then president of the Border Health Association, and president-elect Dr. James R. Scott, chief health officer of New Mexico. He explained how the presidency of the association alternates from year to year between distinguished United States and Mexican health officers, and I could see how this system would create mutual confidence of a personal as well as professional nature. The idea of genuine neighborly relations inspired by neighborly precautions as to each other's welfare, rippling back from the Rio Grande deep into Mexico and the United States, took on sharper outlines.

But I was still puzzled by what appeared to be a very casual

handling of the crowd passing before our eyes. I unhooked an elbow from the rail and started an inquiring gesture toward the control gates.

"That'll get you off the track, Ed. You're thinking too much in terms of patrols and quarantines."

My arm fell in mid-sweep. Jim was right. I had been missing the rigidity and tedium of the usual border controls. There seemed to be something wrong with the picture. There was no exhausting line inching along toward the turnstiles. There were no thermometers being thrust down throats, no turning of eyelids inside out, no forms to be filled out.

"We might as well close the border as try to do all that," said Jim. "About the best we can do here is watch for and take care of the visibles . . . people obviously very sick. The real control work is behind the boundary line on either side. How about it, Ed? Are you ready to take a look at the Mexican side?"

I took a couple of photos of the bridge and followed him to the car, a grin on my face. A story that would mean something to a newspaperman was beginning to form in my mind. Moreover, the hesitancies common to many decent people who dislike either the fact or the appearance of self-obtrusion when talking to reporters, were beginning to slip away from Jim. He was about ten years my junior and I had progressed blithely from the stiff "Major Grider," to "Major" or "Doctor," then "Major Jim or Doctor Jim," to finally just plain "Jim."

It was heartening—a seal of confidence—to have this correct young officer call me Ed. Essentially a field operator myself, I have always been able to understand the inhibitions which shackle the tongue of the man out on the job, especially when some past experience indicates that what he says or does is going to be ninety percent misunderstood, misinterpreted, or misapplied by the "big brass" or "civilian plush" of the home office. It was good to have Grider loosen up.

That day and the next Jim and I thoroughly covered Ciudad Juárez and El Paso from a social and economic point of view, and diagnosed them medically until I felt and to some extent probably acted like a starry-eyed social worker. First we went to several establishments in the Mexican town. These were doctors' offices or

small clinics, which hitherto had represented valiant singlehanded warfare by unselfish Mexicans against communicable disease. Attesting to the hold these men had been able to establish even in this uncoordinated way, was the fact that here and there dismayed citizens were being assured by watchmen or neighbors that "the good doctor could of a certainty be found at 'el centro inter-Americano.' "

My ears pricked up at this. They were getting tuned to the unhurried cadence and musical lilt of Mexican Spanish after years of alternate exposure to pure Castilian and highly spiced Cuban creole, and I was glad to note that when the inter-American designation for the new health center was used at all it was done without emphasis. Intonations showed that the center had already become an accepted part of the community, a tangible evidence of cooperative work, doing a steady business without too much fanfare.

"The way they talk of the health center," I said to Doctor Jim, "you'd think they had grown up with it."

"That's the way we like it," he smiled.

We went to the health center a number of times. It was not striking. Certainly it was not pretentious. It even looked a little drab, with its walls the color of clotting blood and its trim done in gray stone.

Dr. Lamberto Rico, director of federal health services in Nuevo Laredo, and Dr. Emilio Mesa Llorente, federal director of hygiene and delegate to the Border Association, usually were on hand to marshal and shoot facts and figures at me. My notebook began to fill up with data on the increase in inoculations against typhoid, smallpox and other so-called "basics." Statements on control measures for typhus, Rocky Mountain sickness, venereal disease, and tuberculosis were plentiful. One afternoon I learned that a flying brigade of nurses armed with serums and medicines had set forth via auto caravan that morning for a long trip through the Juárez Valley where the long staple cotton plantations draw pickers by the thousands.

This was another angle to the "control in depth" picture. It was common practice, I was told, for the medical brigades to thrust deep below the border to potential or actual trouble spots.

The Juárez Valley furnished an example. No outbreak of communicable disease had been reported, but transients were streaming into its villages and towns, and authorities felt it was the proper time to stimulate health education there, and give precautionary inoculations. A couple of days later the brigade returned. I was guest at a proud demonstration of the mobile X-ray unit which our cooperative service had provided as part of the health center equipment. It was a regular 35-millimeter photo-fluoroscopic unit with its developing laboratory and motor-driven power units mounted on a half-truck chassis. Glittering white, with the cooperative service insignia standing out boldly on the car body and its regal white flag, the unit was in itself a commanding advertisement for modern community health practices.

On my last visit to the health center, I noticed that nurses were streaming into its restful apple-green rooms from outside. This was about lunch time. Jim said they were coming in to report after the usual morning of follow-up work out in the city. Here was another facet to the many-sided picture of health work in depth. Not content with preventive and curative work on the premises, the nurses were accustomed to following cases to their homes, there to implant more firmly the doctrines of hygiene, balanced diet, fresh air, and periodic check-up, or, to state it briefly, establish an appetite for and adherence to all those easily overlooked little daily health practices that often mean the difference between general good health and epidemic.

As the nurses hurried in, clinics in prenatal and postnatal care were breaking up and we had to thread our way through groups of serious looking women, many of them with babies wrapped in their shawls.

Then we were in the X-ray and fluoroscopic clinic and, of a sudden, Dr. Eduardo P. Alfaro had me on the ropes of incredulity.

"Say that again," I demanded.

"I was just saying that we hope to show an increase in the figure for tuberculosis incidence," he repeated. "Our figures are not yet precise. They show an incidence of 1.7 per cent among people of the border region. We think it should increase to show at least 2 per cent as against 1.3 in the United States. The general incidence among workers in Central Mexico is 1.55. Mor-

tality for all Mexico runs to about thirty thousand a year."

That did it. I had my story. The next morning I checked my flight bag at the airlines office, returned to my room, took off the pants and jacket I was wearing and sent them on a twelve-hour cleaning spree. This, the better to resist the impulse to rest in the cool of El Paso's inviting parks. Then I wrote my story. It was full of facts and figures about the economic and social interdependence of border communities which entertain each other's citizens at a rate of one million and a half to two million each month. It showed that El Paso's population of 110,000 was 45 per cent Mexican or of Mexican origin. It explained how the Border Health Association, eager to keep the 2,013-mile belt from California to the Gulf of Mexico healthy and happy, had been organized into six operating sections with a Mexican and an American serving as co-chairmen of each section. It quoted affable Stephen E. Aguirre, United States Consul in Ciudad Juárez, and genial Chris Fox of the El Paso Chamber of Commerce to show how the association work made for better living and better business deep into border states on either side of the Rio Grande. The story pictured unassuming Jim Grider working like a spider in his El Paso office, to spin out the thread of cooperative health activities in this vital area, plaiting them into a strong and dependable line of information from filaments supplied by many members of the association and the cooperating agencies.

The story was what Fred Gardner, uncompromising former financial writer for the Associated Press, would call "jam-packed with good hard facts." And I was hopeful that Pete DuBose, probably the most seasoned of old line foreign correspondents now serving on the home front, would pass it for color and style when it crossed his desk in the Institute information office.

In spite of all this journalistic effort I am sure the story would have lacked conviction if Dr. Alfaro had not startled me. The unblinkable fact that there was still too great a disparity between standards of living north and south of the border would have clouded my reportorial lenses. The temptation would have been to dish out the information made available by Jim and the others, and to avoid getting steamed up about a public health effort which, in face of the odds, might easily deteriorate once the all-

embracing enthusiasms of a mighty victory drive had subsided.

But this young doctor with his determination to get at the full truth of border health conditions had brought to life a memory which had lain dormant some twenty years.

As a kid in Cuba I had learned to associate certain marks on the human body with leprosy. Back in the Florida boom of 1926 I saw a leper in a drying-out tank of a city jail and said so in my newspaper. The wire services picked it up and the saintly city fathers along with a howling real estate mob were ready to pick me up and hurl me as far as possible into the Gulf of Mexico. The real estate crowd howled, Chuck Gross, my city editor, howled back, and the city public health officer quivered. Foster Hailey, news editor, memorized my reasons for saying the man in the tank was a leper . . . one finger sloughing off at the first joint . . . skin like the bark of a sycamore tree . . . a general rotting away. These were things a plantation boy born in Louisiana and brought up in Cuba at the start of the century would know. Gross and Hailey stuck to my guns. The press association men had a field day. Perturbed but honest, the city doctor had to agree that the man in jail might be a leper. He was grateful when Gross suggested that he put the poor leper—operator of a honky-tonk restaurant—and his more intimate girl friends in a private car for the leper colony at Carville, Louisiana, launch a city clean-up campaign, and release a story to that effect. The city earned a reputation for honesty, if not cleanliness, and the boom went its merry way.

The memory would be irrelevant here save that in reviving it, my enthusiasm grew for the type of public health officer Dr. Alfaro represented. In effect he had said:

"We think there are more bugs in our fair community than we know about. We hope to find them, let everybody know just what the score is, and work on from there." I seemed to hear numerous Chamber of Commerce acquaintances of my early years bursting out of their private offices, or perhaps their graves.

I mailed my story, feeling that with the work Doctors Grider, Rico, Alfaro, and their associates were doing, the great border territory between Mexico and the United States would one day be able to look back with a smile on some of the troublesome so-

cial and health problems of today, just as all of those concerned can now look with a smile on the Florida public health episode.

Alfaro had put his finger on a very important part of disease control—attack at the source. First, the source must be established and the target spotted. The follow-up, a follow-up which both Mexico and the United States seemed determined to make persistent, promised a borderland of more productive people living under higher social as well as economic standards.

As to the problem of venereal disease—always a touchy matter, because of its moral implications—I felt that the Border Health Association and the cooperating agencies were on firm ground. As a matter of fact, the whole system of wartime border disease control had started with the question of venereal disease, and had been handled so satisfactorily that it was used as a stepping stone for the extension of health cooperation as I have described it.

To assist in expanding a venereal disease program initiated on the border by the Mexican Government and Pan American Sanitary Bureau, the Institute of Inter-American Affairs in February 1942, through the cooperative service in Mexico, opened up clinics for V.D. treatment all along the border. The Juárez laboratory working as part of the health center, besides examining specimens for its own V.D. clinic, was making tests for clinics at towns all along the border. These interdependent towns were listed for me as Matamoros-Brownsville, Reynosa-McAllen, Nuevo Laredo-Laredo, Piedras Negras-Eagle Pass, Villa Acuña-Del Rio, Ciudad Juárez-El Paso, Agua Prieta-Douglas, Naco-Naco, Nogales-Nogales, Mexicali-Calexico, and Tijuana-San Diego. When I was on the border the Juárez lab was examining about 6,000 specimens a month from these clinics, and I was told that in 1945 it had performed 48,322 serological tests and 4,208 bacteriological examinations.

Not content with this clinical work in venereal disease the Institute's cooperative service in Mexico was emphasizing the training of personnel, case finding, isolation and treatment of early cases, and suppression of prostitution.

All this indicated to me that as far as the United States serviceman was concerned, the border was as healthy a place as any, provided he followed army guidance as to conduct. Since my visit

there talk has been heard from time to time of the necessity of closing the border to soldiers because of the spread of venereal disease. Up until this writing the cooperating border agencies have been able to point out that any increase in V.D. rates at the border are usually part and parcel of increases in the United States and elsewhere—a symptom, in fact, of general rather than localized postwar relaxations.

The border serviceman, as far as I could see, could fall victim to only one social misstep south of the border. Having worked with or adjacent to large concentrations of troops in half a dozen different countries I have observed that the United States serviceman, among all the soldiers I have known, gets the best in social, psychological, and medical guidance. But he, like soldiers everywhere, might take a chance and thereby suffer mischance.

Knowing the Border Health Association and the cooperating agencies to be opposed to prostitution—licensed, zoned, or merely tolerated—and knowing that prostitution, or at least promiscuity always has managed to exist in one or another form and degree despite all the forces brought to bear against it, I set out to determine from a newspaperman's point of view what, if any, particular snares might be set below the border to woo the American serviceman or civilian from the dictates of common sense.

An El Paso newsman acted as foil for me one night as we did the so-called Juárez dives. They were noisy, and taken in small doses, they were fun. Liquor flowed freely and I could accept the judgment on all sides that it was good, as well as cheap. The girls of the chorus, as is the case with honky-tonk girls anywhere, were sitting around at the tables of patrons, military or civilian. Their dual role was obvious. Had I been asked how the Juárez amusement halls struck me offhand, I would have been forced to say they were noisier, perhaps, but greatly like similar establishments I had seen in Detroit, New York, San Antonio, or just outside Washington, D. C. Here was the usual pattern of whiskey and girls, freely mixed and labeled entertainment.

However, mine was not an offhanded savoring of the charms of Ciudad Juárez. Unable to find anything exceptionally ingenious in the form of morals traps for visitors to this reputedly "wide open" border town, I turned my attention to the amuse-

ment girls themselves. And in the course of the long evening I came to the conclusion that these girls to a predominant degree represented the result of an economic situation rather than the cause of a moral one.

We had a succession of these "entertainers" at our various tables, the girls themselves drinking the homemade colored water which the managements charged up to us as expensive liqueurs. Ralph kidded along with them in halting Spanish while I—patently a blond gringo and ostensibly unilingual—listened in. Their "come on" chatter was what might be expected, slightly crude and by Parisian standards, abysmally inept. Some of the girls were even embarrassed at breaking away when the management signaled that they had better transfer their attentions to more promising, or at least drunker prospects. Some, of course, were prostitutes because that is what they wanted to be. But there were numbers of kids who sat and strove to play the dual role of night club entertainer and covetable courtesan, and they could not keep their minds on the business in hand. They spoke in asides to each other of their mothers and families. Some had husbands and babies, some just babies. There were "husbands" in their services and ours. All had little financial crises of the moment. From their exchanges in lilting Spanish I gathered that in general they considered our soldier a pretty good gringo, free with his money and clean. But that did not keep him from being a foreigner, troublesome when drunk, to be slept with when he had money and because that money was needed at home.

I grew depressed as the evening wore on, and I tried to face the reason for it squarely. It came from irritation over the feeling that my generation and preceding generations had failed to give these kids a proper break. I could not help contrasting the border girls with better fed show girls, or for that matter the "chippies," of more flourishing economic regions. The Juárez dancing girls themselves, with their heavy tactics, unconsciously sledged home the fact that by and large they were rank amateurs, both as entertainers and prostitutes. Vaguely at first, then with more clarity as the evening wore on, I began to wish that I could project myself ahead ten to twenty years and revisit the border entertainment palaces. I felt that by that time, certainly, the kinetic forces

at work in the Border Health Association and the cooperating agencies would have had a congealing effect on these girls—make them recognizable either as bona fide artists or out-and-out whores. Their chatter had conditioned me to accept the premise that some of them, at least, would welcome the chance to make a living as entertainers without recourse to some dingy back bedroom.

2

WORKING ON THE RAILROAD

Mexican Style

It took two days for me to get to Mexico City chiefly because there is so much of Texas. I had what is known as a Pan American Airways "open jaw" ticket allowing some flexibility as to schedule changes in the other American republics, so long as I embarked from and re-entered the United States from specified ports. Since Nuevo Laredo was my out port I had to beat back over Texas via domestic air routes from El Paso, about four-fifths of the length of the entire Mexico-Texas Border. It was an excellent way to get an idea of the size of the Lone Star State. A yawning pilot, accustomed to air routes over many eastern states and varied locales, was a little petulant about it as the lights of San Antonio finally signaled the end of his daylong flight from El Paso.

"You know," he mumbled, "sometimes I think they kinda overdid Texas."

A relatively short hop from San Antonio landed me in Laredo in time for a bowl of soup and glass of milk at an all-night cafeteria. Then I was ready for bed, but there was no chance of that, yet. As I got out my overnight kit I realized with considerable dismay that I had left my camera on the plane from San Antonio. A quick check at Braniff Airlines offices established the fact that plane and camera were already on their way back to that city.

Aside from the fact that I needed the camera in my work and stood little chance of replacing it along my route, it was Uncle

Sam's property, German trademark and all. And Uncle Sam has a way of being fussy with officers who misplace national property.

The incident gave me cause to bless a general spirit of cooperation among Americans and Mexicans at the border. Even before I boarded the plane for Mexico City, Braniff's agent had the camera flown back on the early morning plane connecting with my *Compañía Mexicana* ship. And while I was sitting at the airport outside Nuevo Laredo a ground officer of the Mexican company, smart in his blue uniform with white shirt and black tie, stepped up and handed me the little instrument.

I had been so preoccupied about the fancied loss of the camera that I took no notes on the procedure of crossing the border. As I recall it, no notes were needed. It was almost as simple as strolling over the International Bridge at El Paso. An airlines car picked up a number of us at our hotels and we were driven across the bridge to the Nuevo Laredo end. I was in Mexico. Here inspection of baggage, our yellow Pan American health certificates, and our passports were handled on an assembly line basis. It took about ten minutes, including time for a coke all around. Then we were whisked over to the airport where we could watch a sandlot baseball game and have more cokes while waiting for connecting flights to arrive.

From the very start of my actual journeys in Mexico I began to note how oft-repeated misconceptions of the manners and ways of another land can become ingrained in the subconscious. Through books and long association with Mexican representatives abroad, I had made vicarious visits to Mexico many, many times. I knew, or thought I knew, that all of this "land of mañana" business was overplayed to a great extent in the imaginations of my own countrymen. Nevertheless, I was subconsciously unprepared for the ease and efficiency with which my camera was retrieved. And the courtesy that went with this covering up of my own blunder seemed a little more suave on the Mexican end. After four war years of having people engaged in one or another form of public service in our great democracy treat my presence on public vehicles as a barely tolerable necessity, and my desire for food and lodging as fantastic impudence, it was more than

welcome. I began to feel comfortable in Mexico as soon as I crossed the border.

Another misconception borne in my subconscious by popular songs and light fiction came in for erasure. Again, serious reading and personal contacts should have prepared me, but apparently I still clung to the "down Mexico way" feeling, just as one thinks of "going south." So there was a slight jar of reorientation when I realized that almost from the Texas border one goes "up" into Mexico. Erasure of the old misconception was completed in my case as our DC-3 took off from Monterrey airport and began the long climb up over the horizon's rim to sweep over the endless high waves of the great central sierra. It was a clear day, and as we flew through one bank of clouds to another, glimpses of the very heart of the fabled republic were unfolded. Here and there a tiny town, with its church cross held aloft to us, would step out briefly from behind the folds of the severe mountainous backdrop. Occasionally we glimpsed what appeared to be a potato peeling cut in one strip and flung into the green and copper sea below to assume what careless curves it might wish to take. That was the Pan-American highway, twisting its way into the heart of Mexico. We skimmed knife-edge ridges, just blunt enough to support footpaths for the Indian boys and the goats to whom vertical distance seemingly meant nothing. And we saw flashes of so many lonely mountain lakes and streams that it was hard to believe that they were anything but mythical.

"There he is! Old Popo himself—one of our guardians!"

The Mexican air officer with whom I had been chatting lazily had me by the arm and was pulling me around to look under the point of our lifting port wing. We had cleared the rim of the huge crater of the Quiescent Volcano; we were over the great plain of Mexico City—and were banking toward the airport. Popocatepetl (altitude 17,882 ft.) stood as an aloof guardian beyond the rim, like a ponderous monk in a white skullcap. We strained for sight of Ixtaccihuatl—the Sleeping Señora—and saw her lying under her perpetual snow mantle, the outline of a woman lying face up under a white blanket, very clear. As we banked, I had the momentary impression that we were reconnoitering the dividing

line between heaven and earth. Popo and Ixta, as they are popularly called, were off the wing tip, dazzling and austere, reminding us that we were in elements not our own by Divine sufferance only. Then they were hidden as we slid off into the massed battalions of powder puff clouds below, and as we ran in over the lesser hummocks below the rim I found time to be grateful, too, for the skill of our Mexican pilot and the soundness of the big ship.

A half hour later I was at my hotel in Mexico City.

"It's a shame, just a crying damn shame!"

This was Robert J. de Camp, Chief of the United States Railway Mission to Mexico, sounding off on a theme that dominated all of his waking thoughts. A giant of a man, his whole bulk was a quivering mass of indignation and frustration.

It was my first morning in Mexico City, and that is about all I had been able to get out of de Camp during the entire morning. The railway mission had been operating during the war as a separate corporation under the Office of Inter-American Affairs. As was the case with the Institute of Inter-American Affairs and the Inter-American Educational Foundation, when President Truman terminated the office of Inter-American Affairs on May 20, 1946, authority over the Railway Mission was transferred to the Department of State. Part of my job was to report on the effectiveness of the work of this mission in terms intelligible to the layman. I was in a hurry to get at it, because the mission contract agreement was to expire and the mission itself was to be disbanded in a couple of weeks. That was the reason for timing my lengthy field assignment to start in Mexico when it did.

Mr. de Camp's view of my assignment was, to put it mildly, unprejudiced. He was willing to help me, and did, but at the moment he could not help coming back to the conclusion that breaking off of the mission work at the time was "just a crying damn shame." I was to hear this for three weeks all up and down the Mexican National Railways System from Mexicans and Americans alike. And I could sympathize readily with the railroad men if I accepted their argument that dunderheaded bu-

reaucracy in Washington was at its worst when it allowed the funds for United States cooperation in rehabilitation of the Mexican railroads to lapse just short of the time needed to consolidate the war emergency work.

However, it was no part of my job to cry over this spilt milk, though I confess I wanted to at times. There were no more United States funds for this particular cooperative effort, and as far as our Congress was concerned, that was that. Also, I did not want to get snarled up in the divergent views held by the mission members and some of the embassy staff as to the need of continuing the mission. That was something for the technicians and the diplomats to battle out. I wanted to report on what had been done by the mission, particularly what of lasting benefit had been accomplished under the cooperative pattern. Bob de Camp was all for this, and between disgusted grunts, began to fill in the background for me.

Bob explained that December 7, 1941, caught the Mexican railroads as it caught nearly every other organization in this hemisphere—unprepared for the immediate work load. The 8,500-mile system, with locomotives and rolling stock twenty-five to fifty years old, and with its right of way in bad condition, simply was not up to the immediate job of hauling the many extra thousands of tons a month of strategic material vitally needed for the wartime stockpiles of the United States and United Nations. Aside from the necessity of assuring rail transportation of all Mexican surpluses which were freely earmarked for the United States at our prices, the United States needed rail connection with Guatemala to the south. Also we looked to the Mexican railways to transport road building machinery into Central America in a drive to link those countries into the inter-American highway pattern.

None of this came about as rapidly as might have been wished. Disastrous 1942 had just about run its course, and U-boats were knocking off ships almost at will in the Caribbean and Gulf of Mexico when an exchange of diplomatic notes in Mexico City established the mission. It was supported on the one hand by the Office of Inter-American Affairs for procurement of needed steel

and equipment, on the other by the Mexican system itself which drafted one hundred of its top-notch men to work with the peak wartime roster of sixty-four United States technicians.

"By that time something had to be done, and done fast," de Camp told me. "We figured that another six months would see the Sureste division operating between here and Guatemala in a state of complete collapse, even though we were slowing trains down to ten miles an hour all along the lines.

"We got going . . ." His buzzer interrupted. "Sure, send him in," he ordered into the telephone receiver.

"Here comes Hicks," he told me. "I'm glad you're here. He can give you as good a picture as anybody about what happened out on the line."

Mr. Harold J. Hicks, transportation man or traffic expert for the mission, came in. Only forty-seven years old, he said later that he had thirty years seniority piled up on the Missouri Pacific Railway in Louisiana and Arkansas and was going to retire and go fishing as soon as he cleaned up his Mexican job. He was a tremendous, dark-jowled, bulldog of a man, his weight one of those things I judged would be mentioned with reserve.

"We had one hell of a job, all right," he said without preamble, as de Camp introduced me and stated my business. "We had all that stuff to move, and I didn't see how in the world we were going to do it. But we did it."

All that stuff that Hicks mentioned was the lead, zinc, iron, copper, mercury, gold, silver, tin, antimony, molybdenum, cadmium, vanadium, xitle, mahogany, alcohol, and guayule—the whole stockpile of Mexican war materials. And for the most part it was pouring into sidings on the A and B lines of the Mexican National System, or those through-lanes running from Mexico City to El Paso and Laredo to the north.

Hicks ambled into the Mexican scene in the late fall of 1943.

"And when I got here," he boomed, "more than 1,000 freight cars waiting to get down and take off some of the war stuff were backed up on sidings as far north as San Antonio. In Mexico City cars billed out to industry stood on sidings anywhere from four to six months. Monterrey had a backlog of 1,200 to 1,400 cars that couldn't be moved. In Mexico City 3,400 cars were

packed into a terminal that couldn't handle 3,000. Switch engines couldn't get around the yards because of the jam and 800 loadings from the capital area were held up for lack of cars. It was the same way at the other big railroad centers—Aguascalientes, San Luis Potosí, Nuevo Laredo, Juárez.

"More than that, we had spotty trackage everywhere, inadequate yard, shop, and roundhouse facilities, and because it was war we couldn't say much about it all. I never had such a time in all my born days, and I've been in plenty of jams on railroads.

"We never could have done it all without the fine spirit of the Mexican railroad men," said this Louisiana cross between Winston Churchill and Wallace Beery. Then in a challenging tone:

"I can't remember one single time when they refused anything like a sensible request from the mission, can you?"

Apparently Bob could not. At any rate, he did not.

Hicks started at Monterrey and within thirty days had that rail junction and terminal cleared of its freight car congestion. Then he moved down to Mexico City. To bleed off the glut of cars that was smothering even the switch engines in a freight yard crazy quilt, he reversed the custom of moving payloads first. For a three day period he pressed every available locomotive into the task of hauling empties out of the yard, out onto the line, to industrial sidings, anywhere to get them out of the yards. In a week the jam was reduced from 3,400 to 1,800. Switch engines could once again steam noisily all over the yard shunting loaded or empty cars into classified sidings and spurs. Fifteen hundred cars waiting their turns outside the terminal were handled. Industries in the Mexico City vicinity were canvassed and room made on their sidings for long overdue consignments. The empties kept moving all along the system to be routed to smelters and ore dumps for cargoes of strategics. Freed of its paralyzing congestion the Mexico City terminal could handle 2,400 more cars on a revolving basis than had been possible under the old conditions. The free circulation was felt all along the 800-mile lines between Mexico City and Laredo and Mexico City and El Paso. On the Mexico City-Laredo line 3,000 cars handling domestic commerce and 2,000 hauling through stuff to the States were kept rolling all during the war. Once freed of its congestion the Mexico City

terminal remained open, at least up until the time the mission disbanded.

Up at Nuevo Laredo Hicks and his colleagues did a little extra-curricular salesmanship. Brokers there had become resigned to piled up railroad yards as a chronic ill, and were not inclined to hurry their paper work. Sparked by the cooperative railroad men they joined the team, and freight stagnation of long duration was cleaned up in four weeks.

"But we could sit here a month telling him about it and he wouldn't get the feel of it," said Bob de Camp, finally. "He ought to see for himself. I can't go with him right now. Let's send him out with Alec."

Alec was Alejandro Valera, a Mexican railroad man of some seniority himself, detailed to Hicks as alter ego in the troublesome job of making the latter's railroad English intelligible to Mexican railroaders and vice versa.

Through Alec I was introduced to Mexican railroading. I was to find it railroading with a tradition as old as Casey Jones and twice as colorful.

I started my Mexican railroading experience by apologizing to Alec's wife. She, poor girl, came down to the Mexico City station to say hello and goodbye to her husband, which was the first I knew of the fact that Alec had returned just that morning from a lengthy road trip, had been asked to take me over the lines for another week or ten days, and was about to do so without turning a hair.

"You two are pretty noble," I said to Mrs. Valera, thinking of my own half-Spanish wife and my own penchant for griping. The word noble has the connotative meaning of dignity and patience in Spanish, and is untarnished by any of our sarcastic double meanings.

"I would have been screaming for a stay of at least twenty-four hours," I continued, "but you two act as if this were no imposition at all."

"It isn't really," said the girl. "What has to be done has to be done."

"You must not give it another thought," said Alec.

We chatted amiably for a few minutes and with a barely per-

ceptible shrug of resignation as he said goodbye to his wife, Alec ushered me aboard the train we were to ride back toward Monterey. I suspected, of course, that Alec was not delighted at the assignment, whatever opinions he may have formed of me. But I knew it would take something downright impossible on my part to make him show any discomfiture. I made up my mind right there that I would be the most easily handled visiting fireman with whom he had ever had to deal.

"We must see some track, A. D." That was about as close as Alec could come to calling me Eddy. This question of looking at track had already become amusing to us. For in working out our itinerary Bob de Camp kept emphasizing the track I must see. Most of our connections and daylight travel hours were studied on the basis of what track I might view to good advantage. With about a thousand of the 8,500 miles of the Mexican National System to cover, Alec and I had figured that we would see plenty of track without underlined instructions.

"Okay, Alec. Glad you reminded me. Let's look at some track."

We threaded our way toward the rear of the long coach and Pullman train. This was what the Missouri-Pacific calls the "Sunshine Special" northbound on its seventy-two hour run to St. Louis, Missouri. At the last car a steward listened to Alec for a moment, invited us into a small dining room, disappeared for a moment and then returned to usher us into a parlor and observation car section. Here Alec introduced me to Señor Pedro Pantoja, Superintendent of the San Luis Potosí Division of the Mexican National System, who was making the run down from Mexico City in his private car.

"Of course," said Señor Pantoja, as Alec explained my mission. "You really must see the track. We are very proud of it." I gathered that he and de Camp were of a mind about it.

The track was really sweet stuff, to use Alec's expression. Señor Pantoja explained how mile after mile of it had been relaid with heavy rail, supplanting the old light steel threads that bent and buckled even with the relatively slow passage of heavy trains. He said that a Sperry Rail Flaw Detector Car had been brought from the United States and some 5,294 defective rails on more than 3,000 miles of track had been spotted and replaced. He could

not estimate the number of new creosoted ties laid by the rehabilitation crews but as we sped along we became accustomed to accepting the endless rows of piled up, used, and rotting ties as part of the picture. Alec said the number of new cross-ties laid would run into the millions.

But it was not so much the track itself that held my railroad men enraptured. It was the ballast beneath. Piecing the story together from Alec and Señor Pantoja I learned that a little initiative by one of the mission men had solved the ballast problem for the Mexican system. The two men recalled that ever since the railroads had first been laid down in the dim past, crushed rock ballast had been considered the only satisfactory thing for heavy tonnage lines. So for generations the system had been using crushed rock as it could get it, and Alec said they never could get enough of it in even grades. This meant poor packing, broken ties, and twisted rails. It also meant that trains running more than about thirty miles an hour did so at their own peril.

"But," Alec interjected, "one of the mission men, I forget just who, saw a lot of ore slag piled up in huge dumps at the smelters. He knew that some place back in the States it had proved out as good ballast. We were paying high prices for inadequate amounts of crushed rock. The gringos put two and two together and came up with the answer to the problem of ballasting our rights of way for fast heavy tonnage hauling. And the ore people were glad to contribute the slag to—how do you say—'keep them rolling.'"

Rolling was right. Our heavy train was clicking along the great crater basin at between sixty and seventy miles. But with 112-pound rails and the excellent slag cushion beneath us I found that I could easily take notes in ink, notes which look today as if they had been written at a desk.

"It's as smooth a ride as you'll get anywhere—anywhere in the mountains, that is."

This was Larry L. Combs, urbane senior steward of the "Sunshine Special's" dining car, and he was talking with a shadow of restrained pride about his portion of the international run between San Antonio and Mexico City. To call Larry a keen observer of people would be understating the case. He manages people, and whether or not he knows it or they know it, he acts

as constant master of ceremonies, ringing up the curtain on Mexico for countless thousands of North American tourists. Some of these are timid and full of nervous twitterings about crossing into the land of Pancho Villa. They keep looking for the caricature rather than the real Mexico. The same thing applies to northbound Mexicans who seem to feel that in one way or another as soon as they cross the border they are going to be "taken for a ride." With Larry and his crew it becomes a matter of pride to send southbound gringo and northbound Mexican out of the walnut-beamed and iron-grilled dining and club car with a smile. Which seems to me to be the best way for anyone to start learning about a neighboring nation. I had seen this technique employed on transatlantic steamers or Caribbean cruise ships. But never on the crack trains of the European continent.

"It's more or less a family affair with us," said Larry of himself and the three other stewards and their crews. "This isn't just another railroad run. It's an international institution. I forget who it was that said 'tourists are people who work all year to get to be two weeks of what they ain't,' but it doesn't apply so well on this run.

"My southbound people are school teachers and business men and some students for the most part. They come into Mexico to learn something or do something. And northbound I get plenty of Mexicans going to the States for the same reasons. They're not out for a good time as the main reason for the trip, and some of them expect a lot of kicking around. We try to get 'em to relax."

I watched this relaxation process for a while. I noticed that the waiters, all Mexicans or of Mexican descent, seemed to be in no hurry about anything. Instead they concentrated on being attentive. Bilinguals all, they would hover over undecided passengers, explain that items on the bill of fare were just plain American roast beef, or plain Mexican rice and beans—"nothing fancy but good." I heard that phrase frequently in Spanish and English. These same waiters were not too busy to identify landscape items for their passengers, tell them just what part of Mexico might be sliding past the windows. And Larry moved among them "hiya-ing" the old timers, Mexican and American, who use the road consistently, ready always with a cheerful answer to a question. There was no

effort about all this, but I judged that Larry spoke the truth when he said that travel on the "Sunshine Special" in Mexico becomes a family affair. He and his men have developed an excellent technique for making club car camaraderie bilingual.

But I was not going to be diverted for very long from getting some disinterested railroad man's view of the work of our mission. After most of the passengers had started for bed and Larry's crew had gone off duty I asked him to elaborate for a few minutes on his statement about the smoothness of the Mexican railroad.

"Okay," he complied. "It's this way. During the war I was drafted to serve on a lot of troop trains up north. Of course you can't hold rough handling of trains, chopped up schedules, and the general mad wartime scramble against anyone or anything in particular.

"But all that rough going made me think that the Mexican system must be taking an awful beating, too. I knew just what it was like before the war. I didn't know what to expect when I got back.

"So you see I got a big kick out of finding that the old San Antone-Mexico City run was smooth as silk. Those mission boys did a good job."

Larry traced the history of the "Sunshine Special." It seems that back in 1930 the Missouri-Pacific decided traffic to Mexico City justified through train service. Pullmans had been on the run for some time. A dining car service was added. When the service first started a normal trip would take care of between 25 and 30 through passengers. Then the depression came and at times there were no passengers at all.

"But the Rotary Club had a convention in Mexico City in '34 or '35," said Larry, "and to handle people they ran a lot of Pullmans down to Mexico and opened up what they called 'Pullman City.' The Lions held a convention there shortly after that. From then until the war we handled six to eight Pullmans every day. During the war I understand we've been running full up and during the summer months we've had to put on 60 to 70 cars extra each month to take care of the school teachers, students, and summer tourists."

He explained some of the intricacies of keeping schedule.

"It's much easier now," he said. "In the old days we used to be

delayed at sidings. Long freights couldn't get into them and sometimes they'd have to break the trains and see-saw back and forth to get our train on a clear track. One of the best things the mission boys did was to lengthen these sidings. We can pass long freights now with just a toot of the whistle.

"And there aren't so many accidents, freight derailments, and the like. Those things keep passenger train schedules fouled up all the time.

"Yeah," said Larry with a yawn. "It's not only a lot pleasanter to ride this system nowadays, it's a lot safer. You won't get any thrills if that's what you're looking for. Not unless you ride the engine as we go through Carnera pass. That's a thrill for anybody."

I went to bed. And I was just as happy next morning to be sitting at my typewriter as we snaked down through Carnera pass. This was a breathless process in which the long train seemed to turn back on itself and writhe on the line for all the world like a hooked eel. I gave up writing and mentally ducked as mountains, gorges, cuts, and down drops slapped at me through the window.

Then we slid into a dreary country. It was a huge alkali valley girt by ranges of barren hills. It was where the states of San Luis Potosí, Zacatecas, Coahuila, and Nuevo León come together on the map. Here, I fancied, these states had taken great care to hide their real charm from each other. All I could see for a while was desert, stunted cottonwood, and a few miserable 'dobe huts. The countryside was much like some of the more unappealing parts of our Southwest revealed by the Southern Pacific railway, except that the dwellings, where there were dwellings, were of 'dobe, instead of ramshackle frame. I could not blame the "Sunshine Special" for hurrying through this land, or for putting on extra bursts of speed to get through the mountains which came later with their cactus and excessively homely ixtle palms from which rope is made. But for all its impression of tremendous waste area, Alec told me that under the surface were some of the real riches of Mexico—copper, silver, iron, and lead.

Alec broke into my writing to inform me that we were pulling into Saltillo where he could make arrangements for me to ride in the engine cab.

As a train crewman I soon found myself not only out of character but way below the age brackets that seemed to be standard on Crack Train No. 2. On the platform at Saltillo, Alec had held conference with Conductor Tomás Gómez, 47 years in service, and his actual age none of our business. He introduced me to Engineer Martín Ruan, 50 years of service, and he, too, granting no limits to longevity. The fireman, Señor Toribio Davila, could have been as old in service as either of the other two and probably was, but as he groomed his engine for departure he was too busy to be questioned.

Don Martín was a slight little man who carried the traditions of Mexican railroading on determined shoulders. No orthodox locomotive engineer's cap for him. He wore a battered black felt pulled aggressively down to his ears. There was a bandanna around his throat, and a blue jumper and overalls covered his slight frame. He carried a huge railroadman's watch. It was as much in hand as in pocket. The consciousness of record was written all over him. In answer to some questions on railroading in general he bit off a few words about boys doing the work of men.

"Anybody can be a 'maquinista' (locomotive engineer) these days," he said. "Five or ten years and pah!—they're engineers—know everything." Alec told me later that Don Martín had served for years when the Mexican railroads were American owned, that he had worked as fireman learning the hard way from American "hoggers" of the Porfirio Diaz dictatorship era. He did not have to tell me that in those days the American companies never trained Mexicans beyond the rank of fireman or brakeman, so I could see why Don Martín would put particular emphasis on long service and coming up the hard way.

"Let's go," said the little engineer, watch in hand. The interview was over. In a second he was on his hard leather seat, looking around as I hesitantly sought a safe spot between engine cab and tender.

"Hang on!"

A sane order, but where was I to find anything to hang on to in a cab which was all hot metal or operating gadget? I finally settled on the handhold of the tender and in a minute both hands

were so oily that I forgot about my white shirt, slipped my arm through to the elbow and hooked my fingers in my belt.

By that time the big engine was surging like an angry Percheron. In the cab there was bedlam. The firebox roared as Señor Davila worked a spray valve feeding it fuel oil. The businesslike "whoof" from the stack sounded on the inside like bursts from a trench mortar. Hurricanes were let loose as Don Martín worked his air-brake valves. Moreover, a big locomotive seems to leg it rather than roll when it is getting under way. First one set of drive-rods yanks forward on one side, then the other takes a stride. I've ridden horses, mules, camels, and all the man-made imitations of animals and things at amusement parks. Riding Don Martín's locomotive was like riding all of them at once.

I felt my liver being shaken out of me. But I was a reporter, trained in The Associated Press (don't forget to capitalize the "The") and it was up to me to get information even if this was the last long ride to hell itself. Don Martín's back jouncing on his hard seat firmly indicated that he was not to be bothered, so I sought answers from Fireman Davila. There were gauges and gadgets all around him. I expected reference to them when I asked him how he knew when to feed another spurt of oil into the firebox.

"*Experiencia*," came the answer. I asked how Don Martín knew how fast we were going, how he knew when to apply the air in the motherly way he nursed his air brake lever, how he could judge when to ease the throttle back a notch or two, and I got the same answer. Finally I thought I would try one on my succinct octogenarian so I asked how he knew when we were on time. Without batting a lid he answered:

"*Experiencia*."

Don Martín reached up for the whistle wire overhead, groped just two inches short of it, glanced up angrily and pulled it hard down. I had noticed him miss this way several times, and he never seemed to like it. Somebody back in the roundhouse, I surmised, some careless grease monkey, who had shortened the whistle lanyard on Don Martín's engine was in for a little "experience" of his own. But as the baritone whistle bellowed its signal, sounding

like an impatient tug in New York harbor, Don Martín turned and grinned at me. We were slowing down, the engine making as much fuss as it did in starting. I fumbled with my little camera and tried to get a shot of my diminutive Casey Jones at the throttle. The camera slid from my oily fingers and only a fast shoestring catch, in which I nearly went overboard, saved it from bouncing to the right of way below.

Back in the smooth-riding Pullman washroom Alec watched with some amusement as I stripped down to the waist and washed off the grease. For the rest of that afternoon he led me back through the history of Mexican railroading and managed to give meaning to some of the things I had noted, the things that any traveling layman might note.

"Don Martín has a clever hand with throttle and brake," he said. "That is one of the reasons he is on this run. He is one of the many old timers to whom railroading is not just another job. It is a life."

I had noted how our train, despite the snorting monster up forward, seemed to start and stop on velvet cushions.

"It makes me remember Julio Velis," I said. "He was one of the Cuban publishers I escorted around the United States to get a look at our war effort. He was asleep in his berth one night when the engineer tried to bust the train in two on one of those back-breaking starts. Velis sprained his ankle against the bulkhead. I think he'd like Don Martín."

"Yes, I understand you had to draft a lot of freight and yard engineers to handle your passenger trains during the war," said Alec. "There is a lot of difference in handling freight and passenger trains, you know."

"Of course Don Martín can handle both. He is of the old school. I believe it would be impossible to find out where and when he learned to make a passenger locomotive behave. I doubt if his record would show it, and probably his own memory is dim on the subject. Probably it is the cumulative effect of all those years of *experiencia* you say old Davila was talking about."

"I think only the Good Lord himself would know all of the experiences and hopes and ambitions which have made good railroad men out of our 'venerables.'"

These old timers, Alec explained, were the product of a rough and ready school of railroading which started some twenty-odd years before the turn of this century.

Those were the days of buckaroo mates at sea, the days when ship's crews were "shanghaied" in waterfront dives. They were days when railroad fortunes were in the making, accompanied by club and crowbar discipline in construction camps and the hooliganism of rival railroad mobs. Railroading in Mexico began as a hodgepodge of short lines of varying track gauge. Slowly, and with all the growing pains of railroads everywhere, these were changed for the most part to standard gauge and semblance of a unified system began to appear. To a great extent the roads were American owned and operated. For example the roadbed over which we sped as Alec talked, once was the right of way of the American owned Mexican Central Railroad. Engineer Ruan and Conductor Gómez had held various subordinate jobs on that old line in the days when the legendary Conductor Happy Gallagher was getting hired and fired by every railroad in Mexico because he could never refuse a free ride for a friend or a free drink from anybody.

Then came the Mexican revolutionary period of 1910-1914. The American railroad men went out with the old dictator Porfirio Diaz, and as the Mexicans put it, the railroads were left to run themselves. That was when people like Ruan and Gómez showed the stuff of which they were made. With no theoretical and little technical knowledge, but with a great deal of practical railroading learned the hard way, they kept the roads running.

It is true that in that period your locomotive engineer might smell as pungently of saddle leather and horse sweat as of smoke and lubricating oil. Frequently he would end a run, or start one, only after riding miles around torn up track or blown bridges. Or instead of having harmless newspapermen in his cab, the engine man of that era might find himself playing host, willingly or at the point of a gun, to bandoleered riflemen who would ride the roof of his cab and on his cowcatcher, the better to ensure the joyously unscheduled progress of his train.

"When you can get them talking," said Alec, "these old fellows are regular warehouses of recollection about burned out railroad

stations, dynamited track and bridges, wrecks, and shot up locomotives, and rolling stock. They handled trains when whole regiments of partisan troops used to ride the lines with their women-folk and children jamming the cars inside and on the roof."

But instead of disappearing from the Mexican scene in smoke and ashes the railroads somehow hung together. And the old timers continued to keep them running when, thoroughly beaten up and broken down, they became national property.

"So naturally today they are proud men," said Alec.

I nodded. After his exposition it was easy to understand the taciturn, almost fierce, pride of record, which seemed to dominate the elderly men of our operating crew. I could see why the slick trains they were operating in their declining years would become the source of their deepest satisfaction, and the masterful operation of these trains their most jealousy guarded responsibility.

Alec looked neither soft nor particularly athletic. But he did tend to a little extra poundage around the girth and his hair was quite thin on the top of his head. Also his hazel eyes were tired. I thought it reasonable to assume that our inspection of yards and shops during the next ten days would be at a moderate pace. I reckoned without the inner fires that seemed to furnish inexhaustible motive power for this outwardly deceiving son of the fabled "land of mañana."

It seemed as if I had hardly gotten comfortable in my Monterrey hotel bed before Alec—sprucely shaved and fresh—was in my room saying:

"What is wrong, A.D.? Do you not wish to see some track?"

In a little while I was shaved, though not so fresh, and we were eating papaya, ham and eggs, and drinking coffee at the station restaurant. Then we walked. With great glee Alec had picked up the G.I. interpretation of the word "liberate." He tried to liberate an inspection put-put idling near the station, but had no luck. It belonged to a yard superintendent with strong ideas regarding rank, property rights, and things like that. We walked. We walked through the old yards a mile or more to the roundhouse and shops. We went through the carpenter shop and minutely inspected the Diesel-electric repair shop. Long after my feet had begun to protest and I thought my stomach had collapsed, Alec loaded me into a cab and took me over to the new yards. These were laid out

entirely on slag ballast, gray slag this time, and I think Alec wanted to make an actual count of cars on hand before coming up with the statement that the new yards would hold 1,500 of them, and thereby had done much to relieve congestion on the main lines connecting Mexico and the United States. By this time I had a picture of Monterrey as something far removed from a languorous semi-tropical city. Plodding over the railroad yards and taking notes as fast as Alec talked I found it to be a thriving railroad and industrial center. It served as junction point for lines running to Torreón, Tampico, Brownsville, and Eagle Pass, and handled the through trains from Laredo to Mexico City. The main, or old yard, with its shops for building new cars and repairing old ones, its Diesel-electric and steam locomotive shops, employed about 2,000 people, and save for the benevolence of the climate, I might easily have been in any of the bustling industrial towns of the eastern seaboard back home.

Alec had his orders. There was to be no time lost. That night we were aboard the southbound special, backtracking to San Luis Potosí. There was more shop and yard inspection, this time with Division Superintendent Pantoja as guide. He, too, liked to walk, and what with climbing up on freight cars and yard structure to get pictures of a railroad center in operation, I was more than glad of a luncheon respite at the spic and span and very modern railroad station. There I could admire Fernando Leal's murals depicting port scenes and transportation history from the days of the sailing vessel and overland "diligencia," or stagecoach, to modern sea transport and streamlined trains.

But not for long. That evening we talked railroading with some of Alec's colleagues and early the next day took an overland bus for Aguascalientes, key point for the main line connecting Mexico City and El Paso.

We spent a day at the Aguascalientes yards, another day and night getting back to Mexico City, and still there was no rest in sight. I had to visit the plant at Nonoalco yards in Mexico City. And there were the mission men whose names I had heard up and down the line, men I wanted to meet before they turned in their final reports and went back to their various railroad jobs in the States.

My ideas about the work of the United States Railway Mission

to Mexico, terminated as of June 30, 1946, would have gotten into a pretty bad muddle had it not been for what I like to remember as the "caboose" session held in the back room of the dismantled mission offices on my return to Mexico City.

What was left of the mission—about half a dozen technicians—was sprawled or hunched around the room wherever piled up desks, files, and chairs permitted. Alec had left the room seeking to liberate a typewriter and get in his last expense account before the office manager sealed everything and turned his keys over to the embassy. De Camp, looking exactly what he was—an investment banker turned government mission head and trying to put a good face on it—strolled in and out. Now that the mission was actually being boarded up he was a little more cheerful, more inclined to smile over the anecdotes flying thick and fast. I gathered, too, that he hated to see this crew breaking up.

It could have been a sorry session but it wasn't. Though these men were of a mind that the mission should have been continued until all the wartime rehabilitation work had been consolidated and some of the "finer points" of modern railroading worked out, nevertheless they had the satisfaction of knowing that their Mexican colleagues considered what they had done to be eminently worthwhile.

"... and I remember when I first went up to San Luis and Monterrey you had to pole vault over scrap heaps and discarded machinery to get around the plants."

This was U. R. Tracy, steam locomotive technician of the Rock Island Railroad.

"But I'll bet you found everything clean as a whistle on your trip," he said to me, and I had to chime in with an affirmative. I had found everything in the sort of studied order which even a layman could understand. Replacement and repair materials were neatly marked and stacked in the yards. Tool rooms and spare parts warehouses looked as though even I could find what was wanted on a moment's notice. Repair gangs worked on locomotives and cars with assembly line nonchalance, and new switch points, frogs, drive wheel tires, stay bolts, couplings, bearings, and driving rods were coming out of production lines in an unceasing roar of noise and with absolutely no confusion.

Tracy told how 100 modern, mountain-type steam locomotives were brought from the States to work on the Mexican lines. Later 16 new Diesel-electric switch engines, 5 combination switch and road units, 1,500 new box cars, and material to build 1,000 more were brought in. Twenty-three more Diesels and 32 steam locomotives were on order as the mission closed out.

This was only a part of the mechanical rehabilitation work. The mission brought in numerous machine shop units, portable cranes, and lift trucks. Working with Pedro Morales, head of the mechanical department of the Mexican system, the mission standardized welding practices, locomotive inspection, and mileage reports.

Mexican aptitude for things mechanical, Tracy insisted, made it possible for millions of pesos worth of discarded and broken material to be reclaimed. Like their neighbors to the north, whose smashed and discarded automobiles helped to furnish steel for the Jap fleet, the Mexican railroad men had let their railroad plants take on too much of the semblance of junk yards.

"But they are good machinists," said Tracy. "We found them smart at making their own tools on patterns brought down from the States. In reclamation work alone they have saved more than \$1,000,000 by making equipment and parts from broken or cast-off material."

"What about your bridges?" I asked. I turned to a stocky, florid young man working on a huge report sheet.

"We just worked from washout to washout," he replied. His name was J. H. Shieber, and he had been borrowed from the Missouri Pacific to work with Señor Camilo Piccone, Mexican bridge engineer.

"That's no kidding," Shieber insisted as everyone chuckled. "The hurricane and flood of October, 1944, washed out the main bridge over the Tehuantepec river on the line between Coatzacoalcos on the Gulf and Salina Cruz on the Pacific. That was bad. The Panama Canal was choked with war traffic and this was a convenient short-rail haul for oil and other stuff moving east to west."

Shieber told of anxious moments while the Office of Inter-American Affairs sought and procured steel in the States for a

new 600-foot span supported on concrete piers with abutments of solid rock.

"But we had her ready for traffic in 1945," he said. "We were wishing that it was the only headache. There were two other washouts at the San Pedrito and Quiotexpec rivers on the line between Mexico City and Oaxaca. We had to get them cleaned up, too."

Moreover, Shieber and Piccone undertook the inspection of 8,000 bridges. For each they made ratings and recommendations as to load capacities in standardized engineering terms. During our caboose session he was still working on the last of 99 jumbo-size sheets of chart paper, enough to paper an average dwelling.

"I sure learned a lot down here," he said. "What the Mexicans don't know about masonry isn't worth knowing. We could tell them a few things about concrete, but when it came to stone masonry we had to sit back and listen."

"If I personally owned a Diesel locomotive," said a wiry man with a midwestern twang to his voice, "I'd just as soon send it to the shop in Monterrey for repairs as any place I know . . ." This was from D. W. Fortner, Diesel expert of the International Great Northern Railroad.

"Sure," came a voice from the doorway. Bob de Camp had reappeared. "It's a fact that Mexico can have as good a railroad system as you'll find anywhere, provided it keeps on developing along the lines laid down during the war."

"Let's put it this way, boss," rumbled Hicks. "During the war we worked like the very devil to keep the system open and stuff moving. Sometimes it moved slowly, but it did move. Now, the way I see it, the system is in a position to become as good as any of its kind. I'd sorta like to stay and see it get into the refinements of efficient, economic, and safe operation. But that will take time, and I guess that's not for me. Anyhow I've made some mighty fine friends down here."

I could no longer think of Hicks by his American name. To me he had become "Meester Eaks," the man who was liked and trusted by Mexican railroad men up and down the line because he "says and does sensible things." Knowing his manner to be

forthright, even heavy-handed, I had come to regard the Louisiana man as Exhibit A in my private stock of arguments for the "be yourself" school of American diplomacy.

As usual Hicks had put his finger on the mission's sore spot. Like Hicks, all the mission members felt that they could and should stay and do a whale of a job in helping the Mexican railways to become solidly capable of service as the very life line of Mexican national economy. On the other hand, I knew that at the embassy their work was considered as an emergency wartime operation. "It is like the Remagen bridge operation," one embassy official put it, "something that is finished,—a chapter in history—we don't have to keep doing it over again, and again, and again." I was glad to note that for the sake of his own peace of mind Hicks, with an excellent record behind him, was willing to accept the latter dictum stoically. I noticed too, that he spent the next two days hanging around the well-nigh empty offices of the mission, apparently unwilling to pull out for home so long as there was a vestige of life around the mission, so long as there was a chance of a Mexican colleague drifting in to say good-bye. To me it seemed a good augury for future Mexican-United States relations to have this big block of rugged American individualism return to the States with a healthy respect for the type of friendship Mexicans can show when the chips are down.

"I'll say this," he had interposed a number of times during the caboose session, "the Mexicans never fell down on us once. I can't remember a time when they failed to shove cars for handling United States war stuff way ahead of cars for their own urgent domestic needs."

By this time I had several notebooks crammed with stuff about the accomplishments of the mission. My economic data showed that a United States investment of less than \$7,000,000 in the rehabilitation of a system vitally needed by our country during the war, had already come back to the States almost sevenfold in terms of orders for locomotives and other equipment. I could understand what Ambassador Espinosa de los Monteros meant just before I left Washington when he smilingly asked me to find out in Mexico "just who is playing Santa Claus to whom." He

was referring of course to sporadic bursts in our country against what has been called "playing Santa Claus" to the neighboring American republics.

But despite all my packaging of hard facts, which I sent back to Washington in the form of material later used in the *Foreign Commerce Weekly* of the Department of Commerce, I was still troubled by one thought. I knew that locomotives, rolling stock, even Bob de Camp's wonderful track, were material things subject to wear and tear. I also knew that there was much debate as to just how far the Mexican railroad could consolidate its war gains and assure its proper development as the life line of Mexican commerce under a system whereby the railroad "syndicates" or labor organizations themselves ran the lines. This, of course, was a Mexican affair, which was not my business, nor could be called part of the mission's problem. But it did lead to the question as to whether our technicians had left anything which would be of lasting service to those who will have to run the roads no matter what direction their management may take.

José Orozco, of the National Railways and Mission, assistant to Mr. de Camp, gave me what I considered an excellent answer to this question the next day. He took me down to the Mexico City branch of the Railway Educational Bureau, established under mission guidance for Mexican railroad employees. There I learned that 2,700 workers were enthusiastically wolfing technical courses worked out by the Railroad Educational Bureau of Omaha, Nebraska. The course embraced supervision and management, locomotive operation and maintenance, electricity, mathematics up through trigonometry—everything, in fact, that an ambitious young railroad man might need. Other branches of the school were projected at the key points I visited and spots which even my extensive itinerary missed. Orozco, who expected to continue with the school work after closure of the mission, told me that the school bid fair to take in and instruct all of Mexico's 55,000 trainmen who sought advancement and were willing to pay the small fees.

With Orozco I went into the converted mail station that housed the first branch of the school. It was inaugurated by General Manager Pablo H. Hernández of the Mexican National Railways

and Bob de Camp, on February 1, 1946. We got there in midafternoon of a rainy day early in July—the first time I had used my new plastic slicker. There was a class going on up in the forward or lecture section of the hall. We sneaked quietly toward the back of the room, where I saw some of the things that go to make up trains, things you do not see even when you ride on them. Along one wall was a bank of about a hundred air hoses, stacked vertically and joined by bent pipes in an endless chain. Another bank extended along a shorter distance on another wall. Here, Orozco explained, we had the air brake lines of a long freight and an average passenger train. Up toward the end of the stacked hoses were gauges and regular air brake levers mounted on their columns.

"The men are taught how to handle the air at simulated speeds," said Orozco.

Then we looked at some cutaway models of air and throttle valves and charts showing the moving parts of a locomotive. At this moment the characteristic courtesy and hospitality of Old Mexico got the upper hand. The instructor, a middle-aged locomotive engineer, broke off his class work and insisted that we join him on the rostrum. He introduced us to the class, and though I demurred he went into a technical explanation of his demonstration work. He was deep in a graphic and cutaway model system of showing students the advantages of certain modern types of steam locomotive throttles and their safety devices when Orozco rescued me.

"Mr. Stuntz is a newspaperman not an engineer," he said. "But I would like to know how it is that you get across the idea of. . . ."

In a minute they were deep in an intricate valve situation. I could glance at the students.

I saw men and boys in work and street clothes ranging in age from about fifteen to fifty. The average ran to men I judged to be in their early thirties. Some of the faces were seamed and squint-eyed from long exposure to the weather out on the line. Others had the greasy pallor of men who work much over machinery under artificial light. They lolled or hunched in the wooded classroom seats much as undergraduates do everywhere. But there was

a distinction. There was not a restless student in the group. All had notebooks out and pencils poised, and all followed the instructor's answer to Orozco's question seriously. Neither at West Point nor Annapolis have I seen closer classroom attention to the business in hand.

Later I learned from Orozco that these students pay the Educational Bureau the Mexican equivalent of ten cents to \$1.50 per month, depending on the courses they take. The Bureau charges this nominal fee to help defray expenses for teaching materials and because it is recognized that people are not inclined to appreciate anything they get for nothing. The men I saw were signed up for courses ranging from eighteen to sixty months. They could have been no more intent had they been working their way through an expensive, private university.

Orozco told me that the National Polytechnic Institution of Mexico has under advisement the question of recognizing the Railroad Educational Bureau diplomas. Under Mexican professional codes this would be of marked benefit to railroad employees who might seek employment elsewhere.

I looked up the Railroad Educational Bureau of Omaha. I found that it has had 27 years of experience in training employees of some 85 United States Railroads.

That satisfied me. Here, indeed, was something of lasting benefit left behind. Here our mission of World War II had done much to balance the record of the old American lines in Mexico, lines which never trained Mexicans beyond the qualifications of brakeman or fireman and whose feckless assumption that Mexicans could do only the pick and shovel work had left memories galling to national pride.

I felt that in this instance the mission, by adding its educational bureau to the unassuming workhorse attitudes of men like Hicks, Tracy, Fortner, and the rest, had left permanent proof that we gringos are pretty decent people generally speaking, and that we mean it when we say that democracy offers the best and most lasting opportunities for the working man.

CHAPTER

3

GOOD WATER IS GOOD MEDICINE

ALL North Americans who visit Mexico City go to Xochimilco, site of the floating gardens. And I was no exception. The very name Xochimilco, in fact, inspired visions of myself lying out in a punt while señoritas in passing craft pelted me with flowers.

That was, and still is a beautiful dream. For me, by way of contrast, Xochimilco became an object lesson in the modern Mexican trend to clean up possible sources of disease. That was because my motor trip to Xochimilco on the outskirts of the capital was at the invitation of the cooperative health service with Carter Hanes, associate chief of party for the Institute of Inter-American Affairs as my host. In an ancient sedan, with 90,000 miles on its speedometer and with a motor that suffered from the altitude of nearly 8,000 feet, Carter shunted me past some green-scummed canals fringed by eucalyptus trees, through some lanes with corn stalk and twig fences, and then out to the central plaza of Xochimilco. On the way we did see various island patches that once were supposed to be floating islands, and there were growing vegetables bedded on log rafts. But that did not seem to be our day for glamor. For us no flowers, no señoritas.

"Now that you've seen the gardens," said Carter, "we'll go to the health center."

I followed and took pictures while he talked with the engineer on the job and went over the building room by room. Like the

health center at Ciudad Juárez it was faced with red tezontle; the clinic, laboratory, and other rooms on the inside were to be finished in cool green tints. Next to the health center was a similar building which I was told was to be run in conjunction with it as a public bath.

We scrambled up a ladder to the roof and I was struck by the fact that the modest building was being raised just across the plaza from Xochimilco's ancient cathedral. This seemed to me to be good planning, a logical placing of cleanliness, or at least the facilities for it, next to Godliness.

The scene from the roof top indicated that those who chose the health center site must have keenly appreciated the value of accessibility. Below us the life of Xochimilco passed in review. Our building was at an intersection, kitty-cornered across from the big plaza. There the Indian vendors of foodstuffs and souvenirs, the guides for the floating gardens, tradesmen, tourists, vegetable farmers, and school children mingled in constant ebb and flow. Since they were creatures of habit, all, it seemed reasonable that the health center and baths would be brought into the daily routine of the plaza. That, I surmised, would be an excellent thing for Xochimilco and Mexico City itself. Besides being what the tourist posters unimaginatively call "the Venice of Mexico," Carter told me the rich agricultural lands beyond the ancient canals of Xochimilco provided much of the fresh garden produce for the capital. Communicable disease was another of its products, but that, Hanes believed, would be a commodity scratched off the Xochimilco export list as soon as the health center, baths, and other sanitation facilities started operations.

At a more leisurely pace Carter drove me back through Coyoacán. I got brief, almost aggravating glimpses of the summer palace of Hernán Cortés, the conquistador, and some of the other beautiful walled estates of this placid, time-softened community. We passed the Diego Rivera establishment of twin studio houses, the one blue and the other red, with their connecting second floor bridge. Then we were in the Chapultepec park section, a beautiful suburb which in contrast to Coyoacán showed evidence of modern land parceling techniques, but was lovely and spacious for all that.

I had a conviction, carried over from my boyhood in Cuba, that given any sort of a chance, Latin Americans know how to live better, or at least more amply than we do, and I kept craning out the car window the more fully to view the many beautiful homes, parks, and miradero details borrowed from the Alhambra in Spain, which seemed to bear out my belief. Not being an architect I could not put the reasons for my reaction to these beautiful suburbs in technical terms. But I could realize that the homes therein, even the more modest ones, seemed to blossom with eager living rather than huddle behind the prim skirts of respectability.

All during this drive Carter had been telling me of the main directions taken by cooperative health and sanitation work in Mexico. The earnestness of this young Virginian with the Irish face and eyes revived my flagging sense of duty and forced my complete attention.

"Preventive medicine and water supply . . . sewerage disposal . . . food protection . . . health education . . . research . . .

"They all go hand in hand!"

Carter was summing up. He had gone from subject to subject in the fields covered by the cooperative health services. We were trying, figuratively, for a toehold on some one phase of the programs to serve as a starting point for their overall examination. Finally we decided that I should go over medical phases of the programs on paper that night, and then shove off at dawn to see for myself what was being done in the engineering field to satisfy that age-old Mexican thirst for water.

So that evening, for several hours, I became a student of disease. And the first medical jaw breaker I had to try to pronounce was "onchocerciasis" (on-ko-sir-ki-asis), a disease of the eyes which some medical authorities feared might be carried into the United States by Mexican "braceros" or workmen brought in each year to help in the food producing areas of California and the Southwest.

Onko, I gathered, was a parasitic infection causing subcutaneous nodules or infections. We agreed, the Institute personnel and I, that I could call it Onko, for the simple reason that I could never pronounce the longer word without stuttering. In its secondary stages it caused breaking out of the skin and eyelids. Blindness

was one of its ultimate results, and in my later coursing of the highways through upland coffee country I was to see distressing examples of normally fine looking Indian men and women, their faces made repugnant by dead eyes set in raw, painful-looking sockets.

Onchocerciasis was spread by at least five species of fly of the genus *Simulium*. The Institute people told me that these flies were similar to the deer fly of the Catskills and New Mexico.

While I was in Mexico some 20,000 cases had been recorded in the state of Chiapas and another 11,000 in Oaxaca. Surveys included the state of Guerrero, also in southern Mexico, and 4,000 cases of the disease had been recorded in coffee producing areas of Guatemala.

But onchocerciasis was not destined to spread unchecked. The Institute and the Pan American Sanitary Bureau, that solid old American medical organization which worked under sponsorship of the Pan American Union, instituted a control program in co-operation with the governments of Mexico and Guatemala to complete the bibliography of the disease and its vectors so that doctors could be easily alerted to its presence. The project was designed to complete the mapping of areas where the disease was endemic, or common. Emphasis was placed on guarding the Pan-American Highway, which runs down through Oaxaca to Guatemala, against it. One of its more immediate purposes was to devise means and formulae for using DDT against the fly carrier. While I was in Mexico this program was proceeding at that regular pace and in technically ramified directions which public health officials are wont to regard as spectacular.

There was another disease with frightening symptoms which I was to see in isolated instances; and I was glad of the cooperation which could throw against it the weight of Mexican knowledge and United States technical skill. This was "pinta" which looks somewhat like leprosy and which some scientists think was probably a disease of the ancient people of the hemisphere.

Pinta is a spirochete disease. It manifests itself in depigmentation of skin patches and these lesions take on many hues. Some of the common shades and colors are yellow, violet, white, and black. The lesions usually break out first about the wrists and the backs

of the hands and will spread to other exposed parts of the body. Hair may become white over affected skin areas. A positive Wassermann will show in latter stages.

Pinta, the books said, was known in several parts of America, where it went by various names. In Colombia it was called carate; azul (blue) was its name in Chile. In Haiti and the Dominican Republic it was respectively called boussarole and guassorolle. And scientists of the other American republics had been on the trail of the infecting spirochete a long time, notably Dr. González Herrejon of Mexico who first suggested a spirochete as cause in 1927, and Saenz, Grau Triana, and Armenteros who ten years later published a tract in Havana upholding the spirochete theory and naming their paper "Treponema Herrejonii" in honor of their Mexican colleague. Still later the infection came to be known as "treponema carateum."

For lay understanding I thought the cause or infection was best summed up by Hazel O'Hara in the Institute's Health and Sanitation Division *Newsletter*:

"It is one of the nearly dozen pathogenic spirochetes to be uncovered in man's investigation of his microscopic enemies. Two of its close brethren were already notorious for the multitudes they afflict with syphilis and yaws, and for the destruction they cause in the human organism."

As I have said, I could be glad, when I later glimpsed people suffering from this disease that the war against pinta was being conducted vigorously.

"How," I asked Carter that night, "are you fighting it?"

"We got into the battle in 1945," he replied. "Research had been carried on for some years under Mexico's School of Tropical Medicine. And the Mexican Health Department some years ago built a hospital in the pinta region at Arcelia. Our contribution was to provide a clean water system, remodel the hospital, improve the sewerage system, and provide some needed laboratory equipment and supplies. We helped with salaries for research and laboratory technicians and hospital personnel and aided in the purchase of drugs, including mapharsen and penicillin. The Arcelia clinic for the first time in Mexico will provide regular controlled treatments to a large number of pinta patients."

That was the situation on pinta while I was in Mexico. Before this book was finished, however, the Arcelia clinic was in operation. Mexico's Dr. Gerardo Varela, long a student of pinta, Dr. Miguel Bustamante, head of the Institute of Tropical Diseases, and Dr. A. E. Hardison, medical director of the cooperative service in Mexico, had become a team to plan and direct the Arcelia project. At the clinic itself was Dr. Carlos Avila, a specialist in pinta research. Sooner or later the Arcelia people hope to find out exactly how the disease is transmitted. For as Miss O'Hara wrote, ". . . nobody knows yet just how people get pinta. Blackflies have been found to harbor *treponema carateum* after biting an infected person, but what they do with the spirochetes afterwards has not been discovered. Ticks are suspected as a possible carrier. In fact all insects are under suspicion . . .

"*Treponema carateum* is holding fast to other secrets also. Patients studied in the inter-American have cleared up clinically under treatment while remaining serologically positive."

Then, more hopefully, Miss O'Hara reported that further studies would be made after a year's time on some of those patients who had cleared up, to determine whether there might be "serological reversal and whether there had been relapses of skin manifestations."

To me that meant that the Arcelia people were just beginning the long fight against pinta. Finding a positive cure might be as long as it was with syphilis and gonorrhea. I could remember how these latter two had been considered incurable; then curable only after months and years of torturing medication; and then the sulfa drugs and penicillin and a more open public approach to the problem of venereal disease began to get it really under control in the United States.

The technicians of the cooperative services would promise nothing in their war against pinta, of course. Their work was, and still is, too close to its initial stages. But a layman, knowing what they were trying to do with pinta, knowing what their brethren had done with other communicable diseases, could hope for their success and cheer their presence on the job. Whenever I saw a case of pinta, I silently cheered.

I could see that Carter was wearying of the medical bon-

ing process. But he was valiant. Something about this cooperative service under two flags had gotten in his blood. My notion was that he would drop with fatigue before turning aside any opportunity to describe what was being done even to the most casual questioner.

"It gets more important by the minute," he said. "I mean this business of disease control in the hemisphere. One of our first jobs was to knock a malaria epidemic in the head down in the eastern and isthmian sectors of the country, following the hurricanes and floods of 1944. The railroad people had a big job keeping the line open and Mexico certainly did not want malaria at that particular time."

Then there was the cerebrospinal meningitis epidemic which Institute people helped check in San Potosí. And the cooperative service people were planning a malaria control demonstration and training center in Morelos that later panned out so well that the national health department decided upon a similar wide-scale program. There were the general public health training programs, whereby Mexican technicians were being sent to the United States or other American republics. Mexico had recognized her public health problems as an international responsibility. Mexico was right out in the forefront of a drive to make the whole continent a safer place to live.

"From a public health point of view," Carter was saying, "Mexico is right on the beam. You take . . ."

I was reeling. I could assimilate no more. I begged off. Tomorrow, I was sure, would be another day. And tomorrow was coming up rapidly.

It was one of the many tomorrows that would loom up sometimes too quickly for me during the next two and a half weeks.

I became a nomad of the Mexican highways. I got used to finding myself one night in a desert oasis town, the next stop, in some searingly cold mountain range. Interspersed all too infrequently were overnight halts in cool valley municipalities or seaside ports.

Mostly we rode in the beaten-up old sedan which had taken us to Xochimilco. But one night about ten thousand feet up in the once and for all. During a lull in my highway cruising with the

cold, we were glad to hop a second-class bus crammed with some "braceros" who were on their way to work in the fields up in the United States. All the men were barefoot, a fact that made my own well-shod feet ache with cold. But all had dun colored serapes draped snugly around neck and shoulder. They smelled strongly of sheep wool and human being. As I shivered on my hard wooden seat the sleepy Indian boy next to me flicked the end of his cape to cover an exposed shoulder. It struck me in the face. He apologized and then offered me the whole cape. I compromised by clutching one end of it over stomach and chest, and huddled together under its goatish warmth we rode in relative comfort for about three hours, or until we gringos found a town to spend the night.

Water was our quest. It was that same old quest intimately known to Mexicans of Spanish extraction for more than four hundred years, and how many centuries beyond that back into Aztec history we could only guess. For water was still the key in Mexico, not only for adequate health but for all those things that go with the reasonable development of a country where semi-aridity is predominant.

Though the age-old quest was the same, there was, of course, a new angle of approach for my Institute engineers and business men. They took me mostly along the Pan-American route from Monterrey down through Mexico City to Oaxaca and the Guatemalan border to the same old water holes, feeder streams, and water sheds that had scantily supplied the nation since early colonial times. But where the original pioneers were content with the mere presence of water, the cooperative service people wanted to see how it was being treated, how the equipment for its purification and distribution was being used.

They had installed, all told, chlorination plants, captation tanks, reservoirs, etc., in thirty villages, towns, and cities up and down the Pan-American Highway, and its Vera Cruz branch. Sewage disposal had been installed in eighteen villages. Clearly water-conscious, Mexico, once having grasped technical facts reduced only recently to simplicity by years of trial and error in the United States, was out to solve its potable water supply problem cordillera its gear box went out and, ill clad against the stinging

engineers, Dr. Gustavo Baz, then director of public health, told me that Mexico had already increased its budget for healthy water supply from eight to forty million pesos and would run it up to eighty million pesos if the equipment could be procured in the United States.

"Every day we get requests from towns and villages for one of the new water supply systems," he said. "Some of them have lived with their present systems for four hundred years, but now they do not want to wait even a day for work to begin on the new."

Carter Hanes' predecessor, Colonel Martin Johnson of Lynchburg, Virginia, had been the engineer in charge of laying out most of these systems, and hearing of my interest in the cooperative programs had written me enthusiastically of working in Mexico. One day as we tooled along the excellently surfaced highway toward Oaxaca and came to the crest of a hill near Huajuapán, center of the straw hat industry of Mexico, I could recall and relive one of Johnson's anecdotes. On breasting the same ridge a year or so back he had noticed a goatherd setting off a rocket. At the next hilltop off went another rocket. Soon the sky was puffy with them. Bells began to toll. Bands played. People from miles around had lined the highway and the streets of Huajuapán to welcome the cooperative service cortege led by Chief of Party Harold Hinman, M.D., and Colonel Johnson, who had driven down to place the new water supply system in service. This was a great day for public health officials whose similar services back in the States were greeted, if greeted at all, with the merest nod of public approval.

And the day I was in Huajuapán, hearing the town president, Rodolfo Solana Carrion, enthusiastically proclaim that the water system had supplied enough revenue to start a sanitary market project and eliminate open sewers, I thought that another Johnson anecdote recounted by Hanes best explained how a cooperative feeling and sense of mutual appreciation could be developed between Mexicans and United States citizens.

Johnson had his sleeves rolled up at the Huajuapán chlorinator house making the connections to the automatic equipment and the meter when an elderly hat weaver of the district strolled by with his work in his hands and paused to look on and ask questions.

Finally, his nimble fingers never pausing, the old man looked at Johnson and said:

"It must take a very smart man to do things like you are doing."

Johnson's work with the chlorinator had been engineering routine. He was a little nonplussed at the weaver's admiration. To his everlasting credit he watched the weaver's darting fingers for a moment and then said gravely:

"It takes a very smart man to weave a fine hat."

During the latter stages of our highway travels I rode a good deal with Felipe, senior chauffeur of the cooperative health service. Engineer Curt Ritchie and Perc Shaw, business manager, were my most constant companions, and being bigger, longer men than I, they fitted better in the back seat. I learned not to expect poor accommodations and bad food in the average Mexican town. The hotels were uniformly good, the service as good as the accommodations, and always friendly. I had begun to understand that a man who could contemplate a broken luggage strap or a blown-out tire with a certain amount of poise in the States, could travel without fear in Mexico. The highways on the Inter-American chain were first rate. And I had long ago decided that Felipe was the steadiest, most considerate all-around driver I had ever ridden with anywhere.

Finally, one morning we climbed up over the rim of the big crater basin of Mexico City. It was mid-July, but the air that high up had a winy tang to it, reminiscent of early fall in the Poconos. We drove across the great basin in the morning mist, the stately eucalypti lending their shadows to the gloom of early day on the old Camino Real (Royal Highway of Spanish Colonial Days) and which is now part of the Pan-American Highway chain. Down the other side of the crater rim and through Rio Frio we drove to the town of San Martín Texmelucan. There Shaw and I trudged down a narrow cobbled street to the city market, which occupied a full city square with walls blanked on the street side. The stalls faced inward on the big quadrangle where all the market women in Mexico seemed to have congregated to sell their tamales, straw hats, huaraches, bits of needlework, and sticky candies. Shaw went to the strategically placed "tomas" or faucets of the water supply system, to make sure that

they were all in order. He talked to an official who appeared from somewhere, about the need of constant supervision to see that faucet handles were not removed, that leakages were corrected promptly, and above all that the market people would draw what they needed only as they needed it. There could be no guarantee, he explained over and over again, that chlorinated water from the pipes would stay uninfected if drawn off and allowed to stand about the market place in open jars and pitchers.

Accompanied by the official we went back to the car. We all piled in and drove through some ratty lanes to the outskirts of town. Here I was introduced to Ixtacihuatl, the mountain, as the lady bountiful of San Martín Texmelucan's trading population of 35,000 field and orchard farmers, sheep, goat, and cattle herders. It was from her snow mantle, 17,338 feet up, that the people of San Martín got their water.

"That's the new captation tank up there," said Shaw. We were standing on the outskirts of the town by a small chlorination plant and could look for miles up the undulant slopes leading to mountain timber and finally the great white form of the Aztec's "sleeping woman."

"We get a good clean flow to 1,100 individual water connections in the town, and it serves the market place and plaza fountains besides," Perc continued. "People are taking to it, too. The rate for intestinal parasites is going down. It will certainly add to the productivity and general economic advancement of this place. You can see that the climate is wonderful. And the people are pretty darn smart and energetic when they're not sick."

As the day progressed we drove through old Puebla, then through the Valsecillo, object of a big irrigation venture constructed by Sam Rosoff of Holland Tunnel fame. The countryside became more arid. Mile after mile of maguey and other varieties of the cactus tribe flowed past. Scrubby trees mingled with scantier stands of eucalyptus. Old Popocatepetl and Ixtla disappeared behind the screen of lesser mountains. But herds of goats increased over cattle and sheep, and the air grew sharper. Clearly we were going up.

Just before noon we clocked in at Perote, and I got out of the warm car to wonder what had happened to the benevolent climate

of the morning. The air was less like wine now, more like strong whiskey. It knifed at my lungs. Though the plaza where we dismounted was invitingly full of flowers in bloom, standing in the shade of its trees meant shivering. We went into a modestly furnished office in a stone and plaster building, and I resisted the temptation to blow on my fingers as we talked to the town president, Señor Andrés Ortega. He called in Señor Francisco Rosales, president of the town water junta or board.

"Everything is going fine," said Señor Rosales. "We have collected 30,000 pesos from the new water supply system already. Many more people want the water for their houses. Soon we will be able to start work on the sewage system, eh?"

They began to talk of plans and estimates. In the course of it I heard that the Junta de Mejores Materiales, a Mexican city organization which might be said to combine the functions of our Chambers of Commerce, Community Chests, and civic organizations, was cooperating to the full with the water junta. The safe water flowing into the city of 4,700 from a captation tank in the black volcanic mountains overhanging the town was not something that could be regarded as merely correcting a situation of some two hundred years. For the men chatting with Shaw, the modest little chlorination plant and the new pipe system under Perote's cobbled streets was a starting point for their town.

"Our people need no urging to cooperate when they feel that a program such as this is undertaken with sincerity and purpose," said President Ortega. "When they realized that this water system was for the benefit of all and not for a privileged few they got behind us in a solid bloc."

Ortega got out a pamphlet carrying the rules and regulations governing installations of water systems in homes. It showed that the householder was charged about 60 cents a month.

"But he is required to see that the water is not wasted, and that his faucet doesn't leak," said Ortega. "You would be surprised how good the people are about it. They know that if they cooperate with us soon they will have a healthier city. Then we will have a new market with cleaner meat and vegetables. The women are for us. Too many babies have died in the past from intestinal disease."

"What about the flowers?" asked Shaw, with a grin.

"They are learning to be more careful." Both townsmen shrugged.

I wanted in on this.

"What about the flowers?" I asked. "What's the point?"

Then came one of those things that made me understand why I instinctively liked Mexicans. For all the earnest efforts of Perote's city fathers to husband the scant water supply and turn it to productive community use, and for all the enthusiastic cooperation of the people, there was still a problem. It seemed that people who had the running water could not resist letting—oh, so little of it—dribble constantly out of their faucets. In this semi-arid highland it made the flowers such a joy to behold!

I chuckled. So did Shaw. We were in tacit agreement that technical genius might be applied as well to this as to other Mexican appetites for water. But for the moment we were not to be allowed to veer from the economic aspects of the water supply system.

"Si, señor," said Rosales, a huge block of a man with flowing moustache, a man who could talk pointedly of the old hell-for-leather days of Pancho Villa. "Our people can live and work now." He spoke of Perote's economic prospects. In his view the town was a natural for steady growth. Situated on the Vera Cruz-Mexico City Highway Perote itself was a rich farming center for corn, red and black beans, wheat, turnips, butter beans, potatoes, and other staples. Herds of cattle, sheep, and goats roamed its hillsides and lofty pasture lands. One of the two railroads—narrow gauge—connecting Mexico City and Vera Cruz, passed through Perote.

"But Perote has more than that," chimed in Ortega. "I think we have the finest climate in Mexico here. Otherwise why would the doctors select this place for a tuberculosis hospital? The air is such that people come from all over Mexico to get rid of consumption. Now our own people can be free of intestinal parasites, and we will have more hospitals, hotels. Perote, I think, will one day be a large prosperous city."

I dozed for a while as we resumed our journey, and in the hour or so that I was asleep we moved from one world into another.

When I awoke the upland pasture lands and broad sweeps of semi-arid valleys had disappeared. Now the hills were richly clothed. Small "fincas" or plantations raising coffee, bananas, papayas, guavas, oranges, and mangoes bordered the highways. Here and there in the deep green of tropical verdure was a splash of shoal water green.

"That's sugar cane," I said excitedly. "This gets more like Cuba by the minute." Trees I had not seen for a long time began to appear, and their Spanish names began to pop out of dim memory. There was the guasima, whose inner bark was good for the tropical equivalent of poison oak. Caobas, algarobas, ceibas, out of whose gnarled boles one always expected gnomes to appear, passed in review. There was the ciruela, or wild plum tree, the jacaranda and flamboyant, the one with blue flowers the other with flaming red, and both with their huge saber-sheath seed pods. Every so often our tortuous highway would come out on a tea-cup type of valley where our course paralleled that of the narrow-gauge railway. It too sought sea level in a series of horseshoe turns and complete loops in which it sometimes doubled back on itself. Finally Felipe eased around the last mountain bend and leveled off on the long wide stretch of forest and savannah land which extends inland from the rippling sand dunes of the Vera Cruz coastline.

We got into Vera Cruz just at dusk. It was Monday, not a night for one of the triweekly band concerts in the plaza. Nevertheless, it was that enchanting hour before nightfall in cities and towns of tropical America when real living starts. All the day seems to lead up to that hour. Jobs are started and perhaps finished. Contracts made or unmade. There is industry, there is toil, and sweat. There may be teaching, and study, and prayer. All of that is life's business, it is true. But it is not the business of living. The latter starts as the sun fades. Then out come the starched linen suits, the gayly colored dresses and shawls. Showered, powdered and fresh, young people of the tropics then seek the parks, the portales, or those arched galleries facing the plazas and fronting the city's main hotels, business houses, restaurants, and clubs. The older people look on, their chaperonage all a part of a pleasant scheme. They enjoy themselves, too, whether

it is over champagne and lobster dinners under arched portal or cool veranda, or whether it is over the modest cafe table and a lemonade sweetened with grenadine.

Installed in our hotel on the plaza, Shaw and I hastened through our showers. Felipe went off somewhere to see that his beloved car was properly stabled and to arrange for lodging as close to it as possible. We had dinner under the portales—red snapper, rice, avocado salad, a flan, or custard with burnt sugar on top, and black coffee. We watched the young people strolling around the park in opposing currents of sauntering, sometimes swaggering masculinity, and strolling, sometimes simpering femininity. A marimba band appeared on the street before our table and filled the night with its bell-like music. Then the crowds in the park began to thin out. The girls were going home. The tables in the portales began to fill up with the more serious drinkers and gaudier female companions. Evidently some tacit agreement reached during generations of common use of the plaza was at work. Marriageable young women of the city's upper social circles disappeared from the scene. More marimba and string bands appeared, and the portales took on more of a honky-tonk atmosphere. One phase, the most wholesome and most enjoyable, of the evening life of the city had ended. The subtle curtains of social tradition had been drawn. Perc and I took a brief constitutional along the waterfront and went to bed.

Early the next morning in his freshly groomed automobile Felipe hauled us about eight miles out along the southeasterly coast line to a "servicio" health center that had a special aim in life.

This was the Boca del Río Health and Practical Training Center under the direction of Dr. Pilar Hernández Lira. I found the place to be a medical center in yacht club surroundings, a fine place for sailor or sports fisherman. I envied Dr. Hernández Lira his opportunities until he convinced me that rarely were his eyes turned seaward. Instead he was fishing for communicable disease germs, and with the whole Gulf of Mexico to play in he chose, rather, the unappetizing swamp land lying inland along the river delta in which to cast his nets and set his snares.

Of medium height and built on excellent quarterback propor-

tions, Dr. Hernández Lira could have been a northern Spaniard, a Boston Irishman, or a Pennsylvania Dutchman. His graying brown hair would submit to none but the shoebrush pompadour style, brushed straight back, which is to say straight up. He wore it close clipped, almost crew fashion. Hazel blue eyes behind rimmed glasses had a Celtic gleam to them. His face was rather square and clean cut with a slight Hapsburg cleft in the chin.

"This is not a school," he lectured me. "You must not make that confusion. Doctors can come here to get practical field training. They can come from the United States and anywhere else in the hemisphere. Here they will have abundant opportunity to learn about prevention and treatment of tropical diseases."

"And enjoy the seashore," I suggested. A puckish mood seemed to have taken hold of me as this busy professorial character kept bustling around the uncompleted establishment, tripping over workmen and getting in the hair of the contractors with whom he was palpably impatient.

"Ca!," he exclaimed. "The seashore. We hardly ever see it. We had this place ready to function as a health and training center. It had been inaugurated by Avila Camacho himself, mind you. Then we found that parts of it had to be remade. In April and May we had already had our first group of nurses for training, and now this! And you talk as if this were a summer resort."

I subsided. Plainly the good doctor was on tender ground. Nineteen previous years of traveling abroad on public health assignments, some of them at Johns Hopkins and with the Rockefeller Foundation, apparently had taught him everything but philosophic acceptance of the blunders of building contractors. It made little difference to him that the Cooperative Service and hence the Institute back in Washington had been given a poor deal by the contractors and had been forced by its own engineering standards to rebuild deficient parts of the structure. He wanted the Boca del Río Center as a functioning medical establishment right now, and he was in a dither because workmen were still re-framing steel rimmed glass doors, and windows were being reset, and because certain amateurish plastering jobs were being done over completely.

"It's tough on you, Doctor," Shaw said many times that morn-

ing. "But you'll never be able to operate your center efficiently unless we see that this time the job is done right." For a while then there would be a truce born of common objective, and I could get in a few questions about the special mission of this thing that still looked to me like an excellent layout for a boat club.

"This upper floor will accommodate twenty internes. That is if the engineers ever finish it. These internes will be selected from personnel of the Federal Public Health Service, who will work here as federal employees. They will also be selected from the Vera Cruz State Health Service. They will form three sections—(A) Tropical Disease and Laboratory Investigation, (B) Practical Training in (1) tropical diseases and (2) general public health administration, (C) Health Center Routine."

The doctor called out his letters for his alphabetical headings and held up one or two fingers to make sure I would get subheadings in proper place. This was wonderful. The good doctor was dictating formulae, not trying to mislead the press. I fully expected him to peer into my notebook to see if I was getting things right, and he did.

"Good," he said. I had come to a period and held my pencil poised for more. "Now to go on. The candidates may be state health technicians who will be required to pay only for their food, not their rooms; physicians and nurses from the School of Hygiene and Public Health of Mexico. The conditions for them will be the same." The doctor was still calling off his headings and subheadings, but I had decided to string the stuff together in my own way. He was clear and easy to report, however. For my own information I put down rather fully his explanation of how other candidates were drawn under careful screening and carefully stipulated conditions from the various divisions of Mexican public health.

"What about these people from outside of Mexico," I finally had to interrupt. "Dr. Yeager told me that Boca del Río could become a big thing for the hemisphere in the study of tropical diseases. Do you concur?"

"Oh, yes. But certainly. That is where the Cooperative Service and the Institute come in. Volunteers from Mexico and elsewhere may apply to them for assignment to Boca del Río. They will have

to pay board and room. We have had requests for information from Tulane and other universities in the United States, and many similar requests from other countries like Colombia, Venezuela, Ecuador, and Peru. For the latter, the advantage of Boca del Río will be that they will get the latest in public health techniques worked out in the United States, but will not have to go to the trouble of learning English to study up on them. We will establish a quota system as soon as we are able to operate." He glanced at Shaw, then quickly turned back to me.

"But let me give you the complete picture. Now then. We are fortunate here that we are in the center of a region where malaria, dysentery, intestinal parasitosis, relapsing and undulant fevers, are endemic. There is some yaws and I think investigation will turn up more. So that we will always have ample laboratory specimen material for the study of experts. Then, too, the health center will have a hospital bay, where we can keep twelve bed patients. These will provide much experience for visiting doctors under the supervision of a thoroughly trained resident doctor. At the same time the health center will be further serving the community of Boca del Río and El Pato.

"As to lecture courses, they will be in the hands of experts. In malaria, for example, the first week will be under an entymologist. The second will be devoted to survey work in the zone; then will come a week of parasitical laboratory work. The fourth will be devoted to clinical work in diagnosis of symptoms and in treatment of disease. And finally there will be a week of instruction in malaria control.

"Yes," he concluded. "This should become a big center for the study and control of tropical diseases. The cooperative service is giving us a start in the purchase of animal food, collection of reptiles, establishment of our library and laboratories and stocking of the necessary drugs and medicines. That, of course, is in addition to the building, which I hope will one day be finished, and salaries for the next two years for the administrative staff."

"Thanks, Doctor. Now I know why everybody thinks there is something extra special to the Boca del Río project."

Laden with notes as to what must be done immediately Shaw finally broke away from the good doctor and jerked his head

toward the car. We went to a big nearby tourist hotel where we could get a cool drink, laze on the terrace and contemplate the patch of white that was Boca del Río down the beach.

A big DC-4 droned seaward on its way from the Vera Cruz airport to Havana and Miami. I knew it would arrive in the States long before we could drive back up to Mexico City. Also Dr. Yeager had told me that malaria parasites can ride indefinitely as hitch-hikers in the bloodstreams of people who are apparently well, and could be picked up and spread wherever the anopheles mosquito might appear. That would make most of our southern states vulnerable. I experienced the same feeling almost of personal gratitude that had occurred back on the border when young Dr. Alfaro showed so clearly that he and his kind were out to locate and stamp out communicable disease at the source. Dr. Hernández Lira too, I reflected, seemed to be working on the principle that malaria knows no frontiers.

Only a few days later I said good-bye to friends in Mexico City with regret unsoftened by the fact that I was off to another phase of an attractive assignment. I knew I would miss the country where an Indian boy would offer me his only piece of warm clothing, where whole cities went about the business of the day with vigor and burst into song at night, where technical advances must take into account a popular passion for flowers.

Once again the white robes of old Popo and stately Ixtla shimmered off our starboard wing tip as I flew south to Guatemala, Central America, Panama, Peru. Once again I had a bird's-eye view of a gracious land of twenty-two million people whom I hoped we might always count as friends.

As we flew south I thought that even the most casual observer must sense that there was gentility to balance the innate strength of Old Mexico; that dignity was a component of her beauty; and that her bright future need in no sense be dimmed by her fabulous past.

PERU:

Alternatives in Austerity

NO TRANSPORTATION, airborne or otherwise, has yet been invented that can seal itself off enough to keep a human being from being thoroughly processed by climate on any trip that takes in one or more of the Central and South American republics.

That was an impression which developed into a conclusion and then became a rockbound conviction as I flew south from Mexico to Peru.

Flying out of Mexico City at dawn of a mid-July morning, I was dressed in tweeds and was more than grateful for the wool blanket provided aboard ship. Before noon I was boiling at Tapachula near the Guatemalan frontier, approximately 300 instead of 8,000 feet above sea level. Then we climbed right back up to the Guatemala City airport to sleep at a cool 5,000 feet. Early the next afternoon we were simmering in Balboa in the Canal Zone. So it went. Stopping only to pick up or discharge passengers at balmy Cali in Colombia and steamy Guayaquil in Ecuador, we made our next overnight stop in Chiclayo, Peru. There, again it was cold—July cold—with my first taste of South American winter blowing up out of the south.

From Chiclayo we took advantage of a few rays of winter sun that had broken through the haze and skimmed along a faint line that marked far below the converging contrast of two appalling

wastes. One was the Pacific Ocean extending on our starboard side into cold blue-gray infinity. The other was the Peruvian desert, a sea of sand bearing off to port as far as we could see. A greenish-white line which could be distinguished as tumbling surf stretched out below us in jagged defiance of linear symmetry, to fix their meeting place.

After what seemed like hours of idling along over the surf line, but which really was only a short while, we began to climb. There was a good reason for this. We had entered a fog bank so thick we could see our wing tips only in flashes of camera-shutter speed. Then, in a few minutes we burst out on to what appeared to be another sea level. Off to port stood a solid range of mountains, stack after stack of burnished copper cutlery, their knife edges reaching toward the sun. Packed tight against the base of this range was what could have been a mountain lake, frozen solid and snowed over. The shore line was even. It looked as though it would offer admirable foothold for starting a mountain climb. It was hard to believe that this was not a real snow scene, difficult to realize that we were merely flying in bright sunlight above the cloudbank of the Humboldt ocean current which shrouds Lima and vicinity in the gray atmosphere of winter about four months of the year.

Suddenly, we nosed over into the cloudbank and again everything became gray and gloomy. Straining my vision out of the porthole ahead and to the right, my eyes were rewarded with nothing but a wall of mist the color of a dirty sheet. Nothing, that is to say, except an occasional deeper shadow that would flit by, under, or off the wing, and which I correctly judged to be some of the lesser mountain formations of the Lima coastline. Finally, the gray changed to green flecked with white. With pleasing alacrity our big ship leveled off over the waters of the bay, just in time, it seemed to me, to save us all a dousing. Rudderling to port, we skirted San Lorenzo Isle, climbed up over the low palisades of the beachhead off Callao, and as Lima and its suburbs offered us the delightful invitation of homes covered with purple and red bougainvillea and yellow honeysuckle vines, we glided into Limatambo Airport.

Lima was cold and dank in mid-July. I soon discovered, how-

ever, that this was a chill of climate only, a physical factor which an extra sweater or a pair of long drawers would nullify adequately and completely. For I had no sooner set foot down at the airport than I began to realize that Lima was warm, pulsating with life and friendliness, and the most consistently beautiful city I had ever seen. I did not learn until later why there were so few blemishes to her physical charm.

Dr. Ernest B. Howard, chief of party of the Cooperative Health Program, and Sam Davies, associate chief and sanitary engineer of the party, were at the airport to meet me. Soon they had me safely lodged in a pleasant room at the Hotel Bolívar facing Plaza San Martín. Then they got on my room telephone and talked to John Neale and Graham Sullivan, chiefs of the Food Supply and Educational Cooperative Services, respectively. Teamwork, I noted with a great deal of inner satisfaction, seemed to be the order of the day in this, the first capital I had visited where our educational, food, and health people all had programs. Before evening we had worked out a schedule which would take all of the six weeks allotted for my Peruvian visit, and more. By agreement among the three party chieftains, I was to see health and sanitation, food supply, and elementary educational projects at work in the desert, in the jungles of the upper Amazon, and in the rarefied atmosphere of the upper Andes. I could take my choice of terrain for starting my reportorial work, but I must realize, of course, that all of them were severe. They hoped that I could withstand some pretty rugged travel, and they confidently expected that if I bore up physically I would thoroughly enjoy myself. No one told me, however, that in the course of my Peruvian reportage I would uncover new depths of appreciation within myself for my countrymen and the things for which they stand. Nor did they tell me I would meet Peruvians who would make profound imprints on my thinking. I myself did not dream of any such things happening that night. I did not dream. Not having to make a dawn take-off the next morning, I had eight good, free hours ahead of me, and by breakfast time the next morning I had, as Looie Probhaus of the AP used to put it, "never slept so fast in my life."

After breakfast, Bert Howard drove me down to Rimac, that old part of Lima where poverty and disease had defied public health administrations for many generations. We drove to a spic and span modern building designed so that daylight would flood the building to the maximum during the long winter overcast, and for the greatest possible circulation of air during the summer months. Dr. Mario León greeted us. He had spent two years on an Institute public health scholarship which took him to Ann Arbor, Johns Hopkins, and the School of Tropical Medicine at San Juan, Puerto Rico.

His manner was direct—incisive. He was as proud of the health and training center which he had been chosen to direct as a young naval officer would be of commanding a new type destroyer just off the ways.

"Plans of this building," he said as we moved from room to room, "have been exhibited in Sweden as an example of modern South American architecture." I had noted already that with its deep windows and free use of built-in construction, it could serve as an admirable recreation center or club.

"The accent, as you see, is on utility, yet it is a clean and comfortable place for the people to come for treatment and clinical instruction." Dr. León went on to explain that the center was built on 5,000 square meters of land, and itself occupied 3,000 square meters of space. It housed an adequate laboratory, dental service, sanitary engineering section, and nurses' working and staff rooms. The three main clinics were for well babies, prenatal care, and children of school and preschool age. Rimac's 12,000 families of scant means are prolific, I was told. Hence the emphasis on care for the 8,000 children already registered and other unborn thousands. A tuberculosis section with modern X-ray and fluoroscopic equipment, a venereal disease dispensary and treatment clinic, and a communicable disease control section completed the physical layout of the Rimac center.

But, as usual, I was looking, not so much for what the health center had as for what it could do to elevate basic human conditions in the community. Dr. León was cocked for this question.

"I'll show you not only what we can do but what we are doing . . . right at this very minute, what we are doing."

We walked into a large room arranged like a small lecture hall. Women in blue uniforms with white collars were sitting in the wide-armed chairs, their notebooks open before them. A tall, dark-haired young woman, speaking and looking Castilian, was bringing a morning session to its close. Dr. León patted the air, palms down in an "as you were" signal, and she kept right on with her work. I was able to observe some of the women who lingered behind while the others gathered up their notes and filed out. There were about fifteen of them. There seemed to be no age restrictions and I found out later that they did, in fact, range from eighteen to forty-three. Among them were a couple of smart-looking youngsters. I would have laid a ten-to-one bet with Dr. León that they would escape marriage not more than six months after completing their courses. A couple of the more adult women looked older than their ages. Theirs was the look of people who already had worked long hours with life in its sorrier moods—and to them its most consistent ones. It hurt me to watch them take the precaution of having instructions for the next day's work repeated before they left the room. Yes, it hurt me, but I understood. They hung back until they seemed sure that they would be the last to leave, that no scrap of information would pass them by. As a younger reporter I would have put them down as either over-anxious or slightly more stupid than the rest. But years of watching wishful people as they listened to expositions of a better way of life, had me on guard against any such facile reportorial commitment. I had seen the same disinclination to leave educational and informational precincts manifest itself in the almost suspicious hesitancy of humble folk in Spain, people who wanted to be convinced that a republican form of government would give a better break to their children and grandchildren if not to themselves; people who were betrayed, ironically enough, by neighbors too blindly replete with the enjoyments of democracy to see that Spain was being used as a testing ground for assault on their own smug citadels. I had seen the same look in the eyes of folk not too well-schooled in history or political debate when they tried to believe that Mussolini "could do no wrong," and that their children's children would be able to testify to the wisdom of submitting their wills to his political mysticism

and his hypnotic personality. The betrayal of these people could be no less bitter to them, I supposed, because it stemmed largely from their own love of dramatic puppetry, and operatic self-delusion.

"God forgive us if we ever fall down on *these* people," I thought. It was a startling little prayer almost audibly jerked out of a subconscious too suddenly awakened by the smoldering demeanor of the elder women in that cedar and mahogany furnished Rimac lecture room. Theirs was a mixture of urgency and patient restraint often seen in people of riper years who want as much as anybody to share in progress, but who wish to do so by careful planning rather than impetuous leaping.

Curious, and for the first time in my encounters with our field people, a little frightened, I turned to be introduced to the instructing nurse.

"Does she know?" I wondered, as she gripped my hand with Western warmth. "Is she aware that to some of these women she is a mixture of Florence Nightingale, Joan of Arc, and Mrs. Franklin D. Roosevelt?"

That was my concern. I wondered whether Rosina Romero, of whose work in setting up courses of public health nursing in Honduras, Bolivia, and now Peru, I had heard much, realized that she personified the hopes and ambitions of some of the women she was teaching. I wondered the same thing about Dr. León, Bert Howard, and Sam Davies. I wondered it about Ione Ripley, from Milwaukee, supervisory nurse of the center, who entered the room as we chatted. In those few moments of pin-pricking lucidity I realized that our government and the others involved in the cooperative contract agreements might regard them as matters for scheduled completion and termination, but that to the people for whom they opened up sociologic and economic horizons of a definitely desired nature, they set a pattern for something a great deal more enduring and respectable than international trial marriage. I knew that in some quarters at home the interest in the cooperative programs was, at best, casual. But there was nothing casual in the eyes of those nurses who had hovered around Rosina Romero for fear some shred of information or electric jolt of her personality might be missed. There was nothing casual about

Dr. Howard or Dr. León, or Ione Ripley, as they continued to tell me of the work of the center in Lima's poorest neighborhood. As a matter of fact they were all so earnest, that I had to file away the fear that we were dealing in currencies whose value we little realized, in order that I might pay closer attention to what was being said.

"The enthusiasm of the visiting nurses is the real measure of our progress," Rosina was saying. She had us before a map of Rimac on which varicolored pins showed the areas of operations. "These kids plan their own zone work. The blue pins indicate infant cases which come to the center and need follow-up work. The pinks are maternal, and so on. There are five zones, divided according to population, of about 5,500 each. The men work in the cotton mills and the women at odd jobs and as house servants. Then there is a nearby army barracks. It is not a rich neighborhood, but my kids don't mind that." I noted that to Rosina the nurses could be grandmothers, but they would still be her "kids" so long as they wore the nurse's uniform.

She explained that the girls came from the various hospitals of Lima to learn public health nursing. The courses ran an allotted span of six months of intensive theoretical and practical training.

"That means lots of follow-up work," said Miss Romero. "And of course, we know that our kids would not continue to be so enthusiastic if they didn't get an awful lot of cordial cooperation from the people they treat. That is what makes us glad that Dr. Alberto Hurtado (Minister of Public Health) asked that the Servicio Center be placed here where the poor people need it most."

"Yes," Dr. León interjected. "It is a good thing all around. You see this center fills a need here in Rimac. We advise or treat about 250 people a day. The center is always crowded. And our sanitary inspectors get out through the five zones to register restaurants and inspect other places where disease is most easily communicated. As Miss Romero has said, the nurses spend a great deal of time with the families of Rimac. The diseases we treat are endemic in the region, that is to say they are diseases which could occur in epidemic form in Lima, or anywhere along the coast. They are typhoid, malaria, tuberculosis, intestinal parasitosis, and

venereal disease. The point is that we are set up here, in this old, backward section of the city, in a way that demands the utmost coordination between doctors, nurses, and sanitary inspectors, both in curing and preventing disease. It is a wonderful demonstration center for doctors all over Lima and elsewhere in our country."

"And we are set up so that we can teach the doctors something about nursing," Rosina smiled.

"What do you mean?" I asked.

Her explanation was to the point. Custom, and lack of emphasis on nurse's training, had never tended to raise these women much above the servant status. Moreover, custom again, a thought-habit I knew to be still current in many parts of the United States, had not used the professional nurse to the fullest advantage. The idea of educating her to carry the message of hygiene, good health and nutritional practices into school and home had lain dormant. Even the idea of nurses attaining to professional status was new and, to a few, objectionable.

"But the idea is catching on in medicine generally," said Miss Romero. "The doctors are beginning to realize that it is a good thing to have nurses who can follow up work in the center by nursing care in the home. The old idea of a health center was to make it a disinfecting clinic with baths to which the people could come every so often. Teaching them to clean up their homes and keep them clean as a means of avoiding disease is new. The old idea would make them dependent on the state for hygiene. Our kids try to teach them that clean living is a part of their privilege and responsibility as independent citizens."

"Then what you're trying to leave here is something these nurses and doctors can build on indefinitely?" I asked. "Of course, you got your Chicago School of Nursing training in a neat package made up after a couple of generations of pretty rugged travel along the public health road back in the States. Here the health center hasn't been open more than a year and you've got less than two years to go under the cooperative agreement. Do you think you can leave a strong enough basic machine to go on of its own momentum when you pull out?"

"That's something for you people in Washington to figure

out," snapped Rosina. "I've said right along, and I'll say it to anybody, that it will be a crime to stop this work until our kids have made it a thoroughly tested working part of the national health system. I don't think it can be done by the end of 1948, and I don't believe anybody in Peru thinks so, either. But if I sounded off about it, people back home would just scream that I was trying to perpetuate my job."

There was an unquenchable fire in Rosina's eyes, that made me determine to try in every way known to a newspaperman to tell the story of what our field people hope to leave behind, and their fear that their time would be too short to do a job worthy of the folks back home. It seemed to me imperative that if Rosina and Bert Howard and the others engaged in the actual work of trying to help our neighbors toward a generally better neighborhood situation thought that the work should be continued indefinitely, then means should be found to get their story told.

I was beginning to learn that no matter what the legal language of contract agreements might say regarding time limits on people-to-people cooperation, no stop watch could or should be held on the spirit of cooperation itself.

CHAPTER

5

FRIENDLY HANDS HAVE LONG FINGERS

IN PERU, travel outside the immediate confines of the larger cities is apt to take on the aspects of an expedition. Places for provisioning in either desert or jungle regions can be all too few and far between. And in the Andes distances are exhaustingly vertical. It takes planning to go anywhere.

At this sort of planning my trio of party chieftains were good. Thus at six o'clock of a wintry morning in the latter part of July, Bert Howard, Sam Davies, and I drove out to the Lima airport to embark for Iquitos, we hoped. I confess I was a little jittery, although Sam and Doc Howard had done it many times and come back no worse for wear. Sam Davies, though, was one of those Little Rock, Arkansas, characters, whose drawling assurances made you well aware that just a little slip here or there might provide unhappy story endings.

"Shucks," he told me. "This trip will be nothing. In the old Catalina it took five hours or more, if Cap'n King decided it was all right to fly. We're goin' in a DC-4. Three hours. Course we can't land on the rivers, but we can always come back if we have gas enough to get over the hump. But I imagine the boys will find the strip at Iquitos all right. They pretty nearly have to. Don't you think so, Bert?"

At which Bert's sharply chiseled jaw softened into a New England conception of a guffaw, and I laughed heartily—too heartily.

These two tall men, one a drawlin', huntin', big-boned south-

erner, the other an equally tall, more angular, finely metaled Bostonian, midgedted my five feet, eleven and a fraction inches. I felt they dwarfed me in other ways, also. With me any outward aspect of equanimity over the coming flight of twenty to thirty thousand feet straight up to clear the hump, and then down to cruise by instruments over several thousand miles of canopied jungle in search of a lone airstrip, was the product of grim determination, not nonchalance. Bert and Sam were already talking ahead of the trip itself, about the job they would do at Iquitos. They might as well have been talking about the moon. My mind would not go beyond the terrible skyscraping eruption of mountains we had to get over. I was anxious about the weather, dubious about the ship, and fretful about a touch of dysentery I thought I had. There were only two comforts to hang onto. One was that if we got to Iquitos before the amoeba got me, Bert had a modern hospital functioning there. The other was that my stout insurance agent back in Washington had provided my wife with a travel policy which would help take care of our numerous offspring, whatever means of locomotion might be responsible for my demise, so long as I had the good sense to stay out of government aircraft, refrained from playing polo, and avoided riding to the hounds. I had a card in my pocket which indicated the company would spend up to one hundred dollars, aside from the policy commitment, to cart my remains to hospital or funeral home, if they proved recognizable, and if it seemed worth while. I got a macabre laugh out of thinking just how much sense the card would make to some curious Andean or Amazonian Indian poking around in the ruins of a once-proud ship.

"Cheer up, Ed," said Sambo as we talked over our coffee at the airport. "You'll soon be down where it's warm, boy."

"You cheer up," I grumbled. "I've got stomach cramps, and I'll bet that old can out there has made at least a thousand trips over the hump. And I mean the Himalayan hump!"

Bert was immediately solicitous about my ailment, so concerned that I felt like a spoiled boy. That was the tonic needed to cheer me up. The morbid haze lifted and we went aboard while I assured Bert that I had taken a nervous stomach over a good part of four continents, and should have known better than to eat so

heartily of the Hotel Bolívar's delicious corvina the night before.

Then, too, I had to make a mental apology to Elmer (Slim) Faucett's big liner. It was a sweetheart of a ship, a fairly old sweetheart, but sound and true. As the four big engines revved up at the end of the runway and the old girl surged against her brakes and made those skittish motions that airships under ground restraint always make, I noted that she did not tremble or shake unduly. She felt taut, eager to be airborne. Formerly a hospital ship, and now converted to freight and passenger service, she had been treated like a lady, and she acted like one.

We roared straight for the Andean range on a steep climb that was utterly contemptuous of such things as spiraling for altitude, and even a little indifferent to passenger comfort. In a matter of seconds we burst out of the Humboldt haze. It was as if the ship's wings and bellowing engines had exploded in sheets of flame, so intense was the glare from glittering metal and the false snow-bank from which we had just emerged. A startled "ah-ah!" heaved through the ship. Then everybody smiled, and some began to chatter and point. Not for long, however. We were straining up, up, and up, our backs plastered against the seats. There were only a few minutes of gay shouting back and forth across the aisle before the steward began to check oxygen vents and mouth tubes. Sam had the aisle seat alongside me. Bert was just across. I tore my eyes away from the port as the steward adjusted my oxygen tube.

I suddenly noticed that Sam's skin was getting the color of parchment. It seemed to be tightening up over his cheek bones and his tan was turning a shark-belly white. His whiskers, blue and forbidding, began to bristle straight out like the bristles of an aroused porcupine. I looked over at Doc Howard. Like me, Doc burned and never tanned. Now the red was draining out of his face and his thin lips were getting blue. He saw a question in my eyes, and nodded.

"But don't take it all at once, or you may get sick," he said. "Easy does it. About half a dozen deep inhalations every five minutes."

I started a maneuver toward the toilet in the stern.

"Try to move around as little as possible, Ed." Doc leaned back

with his tube between his lips. Sam's brown eyes under his ruggedly stemmed glasses were already lidded, and he too was inhaling gently from his tube. When I returned from the tail of the ship I was already feeling lightheaded, dizzy. I gulped several drafts of the oxygen and felt the spell pass as if I had wiped it away with my handkerchief.

"Boy, this is great!"

I was so proud of my personal discovery of oxygen that I forgot what Bert had said. I was all over the ship making mental candid camera shots of the Andes over everybody's shoulder. Because of a hung-over wartime regulation prohibiting aerial photography over Peru, the little instrument capable of making more permanent picture recordings was held in escrow in the pilot's lockers. I had not had the foresight to seek a waiver from the proper authorities so that I could use my small camera with its powerful lens.

We were heading for Huascarán Pass north northeast of Lima, and were skimming over some of the more rugged formations of the gigantic cordillera on the bias, for all the world like a sea craft quartering into the waves of a high-running sea. Below us the tortured waves of earth and rock, scooped up and tossed about in some atomic convulsion of the past, reached for us with clutching fingers. Some of these fingers were delicate and almost inviting, some sharp and belligerent, others spatulate, and derisively crooked to snuff us out and crush us should we let them so much as brush our fuselage. Some of the peaks poked white-capped heads up into the cerulean blue, their bodies garbed in the rusty robes of Franciscan friars. Here and there were whole mountains clad in robes of softer purple, or maroon, or an occasional deep blue. And for minutes at a time we flew over entire worlds of burnished copper, never-never lands of no consistent pattern, save that every implement, weapon, or crushing tool known to man might have been assembled on heroic scale and turned business end up to engage and obliterate anything that might tumble out of the sky.

"You're going to be sick if you don't stop moving around," grumbled Sam. He stretched and again closed his eyes. His blue whiskers had come out still another quarter inch.

I reached for my oxygen tube. People were beginning to peer out the portholes on the starboard side, shading their eyes as they did so. I stepped quietly over Sam's long legs, slid astern past semirecumbent Doc Howard, and moved to an unoccupied starboard window.

Huascarán was coming up fast on the starboard hand. Suddenly it was just off the wing tip and receding as I cursed my lack of a camera. My sensation was that we had flown into and glanced off some impossible confectioner's nightmare.

My figures showed that Huascarán stands 22,205 feet above sea level, or sixth in the platoon of fifty Andean peaks which range higher than 20,000 feet. I judged that we must be close to 20,000 feet up ourselves as we negotiated the pass.

"It's too damned high!" I muttered and glanced apprehensively at Sam, whom I was sure I had not disturbed in resuming my seat.

"It's high, all right," he grunted, without opening his eyes. "Are we out of the pass yet?"

I thought not. Sam subsided and I followed suit. As I recall it, I forgot to fortify myself with oxygen. Whether I passed out or went to sleep I never knew. About an hour later Bert was shaking me by the shoulder from a seat temporarily vacated just behind us.

"We're going down fast, Ed. I'd stay awake until we level off, if I were you. Might save you a headache."

Automatically I reached for the oxygen tube. It gave out nothing but the taste of rubber. The steward had secured the main valve. I looked out the port light. Far below a smooth sea of green stretched without a ripple as far as I could see. Its only compromise with ineffable monotony came as it played lazy chameleon to the blandishments of the sun. Here and there as the sun ducked behind rain clouds the jungle would turn a little darker than its normal olive green. Or, in sudden bursts of solar rays through unmisted ozone it became more of a mustard than an olive green.

That was all. We were flying blind, that is to say by instruments, over the green canopied upper Amazonian basin. Thousands of miles of it extended to the north, east, and south. I knew that within the hour we must either pick up the confluence of

the Marañón and Tigre rivers at Nauta, hit the airstrip at Iquitos right on the button, or consider ourselves temporarily lost. I knew also that being "temporarily lost" in the Amazonian jungle could mean being out of touch with the outside world for weeks, or months, and in an extreme case, years.

But our old lady and her skipper seemed to know the way blindfolded. We crossed the spit of sand where the two rivers met with such precision that I wanted to yell, "Strike!" Then we eased off a point to port, and with the upper Amazon itself now on our starboard hand we nosed down to a big, rectangular bare spot which had been scalped from the jungle, and which was the Iquitos airport.

Here was another one of those radical changes in the makeup of men and things which could be startling in spite of the regularity with which they had occurred all during my journey. At the airport there was not a tile in sight. The station building was oiled hardwood flooring and varnished cedar paneling. We were met by young men in white linens and khaki. They wore pith sun helmets, white or khaki. And their pants flopped out of or were tucked Zouave fashion into the tops of slightly higher than ankle-length mosquito boots.

Bert and Sam and I began to shed garments as soon as we stepped down from the plane. We had not thought of doing it on board for the simple reason that our heavy clothes were still comfortable in an atmosphere imported from dank Lima and arctic Huascarán.

My pores seemed to gape open and gasp for air in an atmosphere in which one could almost bite off chunks of oxygen, and the tweed trousers were beginning to itch and scratch legs suddenly come too fully alive. But there were the proprieties to observe, and paradoxically enough it was not really hot. It was merely that the air was thick and rich, with only a hint of the miasmatic. The young men who met us and were busy passing our gear through customs were cool and collected. So was I, from the waist up, with the skin under my shirt and undershirt responding comfortably to its renewal of relations with oxygen-laden air.

The men who met us were Dr. Emilio López, director of the departmental cooperative health services; Dr. Damaso González,

head of the Iquitos hospital; Dr. Armando Lara, chief doctor of the health center; sanitary engineer Luis Orihuela; and agronomic engineer Antonio del Río, of the food supply service. They made a great deal of Bert and Sam. It was good, the quintet indicated with much back slapping, to see them—Bert and Sam! How were things in Lima? When would they be sending out additional personnel? And where, in the name of all conscience, had they been keeping themselves?

This went on excitedly as we jeeped our way over the rutted road to Iquitos. The only asphalt in repair in the entire area seemed to be in the airstrip. I came in for the courtesies, of course, but was glad that most of the conversation was directed to the field men. Something was going wrong with me, in me, and all over me. My head ached, and that was the least of it. My eyeballs felt as if they had been freshly sanded. Fillings I had long ago forgotten started bayonet drill all up and down my jaw bones. My stomach was not my stomach. It was a ball of feathers soaked in brine, and it would neither come up nor stay down. A touch of bursitis in my left shoulder became the advanced arthritis of a very old man. Bones in my right wrist which mended perfectly after an experience with an old stem-winding automobile in 1916, felt as if they had been fractured again. And my right leg and lower back, reliable weather barometers of twenty or more years of service, suddenly felt as if they were again under the weight of the mare that stumbled and rolled on me in a dry river bed in my youth.

"Down hill soroche," Slim Faucett explained it later. "Lots of the boys get it in these latitudes when they come down too fast from too high up. Makes you remember everything that has ever been wrong with you."

That, I noted, was a very apt description of symptoms of this version of "soroche," the Andean term for altitude sickness. Such was my misery, that once I had gotten to my bed in the Malecón Palace Hotel fronting the Amazon, I did not leave it until the next morning. Nor was it until then that I realized that the thin mattress of the mahogany four-poster had been laid without benefit of springs on a cross bed of hardwood planking. I did remember to make a note to modify my flippant attitude toward experi-

Del Río simplified everything. Less than medium height, diffident, and with an almost unnoticeable impediment in his speech, he appeared at the breakfast table, declined food, and with sun helmet in hand sat and tapped his heel while we had another round of coffee. The young sanitary engineer, Luis Orihuela, joined us too. Someone remembered to ask Del Río about the day's schedule.

"Everything's ready, we leave immediately for Guayabamba, should be back for lunch, then you have the afternoon free," he spurted at us. I learned to watch for these bursts from the wiry little agricultural engineer. Never loquacious, he would hold back until he had his conversational sights in line, and then machine gun us with what he had to say in one long stream of staccato phrases. This first sample of his technique left us abashed, and we made haste to finish our coffee and climb into and on the waiting jeep.

A couple of miles and several thousand ruts from the main plaza of Iquitos we turned into a long lane leading to extensive plantations. At a corral we were met by four agricultural engineers of the Peruvian government. Introductions revealed them as Manuel Pena Alegria, chief of the livestock section of the Guayabamba Experimental and Demonstration Farm; Fidel Ruiz Romero, tropical plants section; Nicanor Raitegui, forestry; and Reynaldo Crespo, director of the whole works. We began to learn about farming the jungle way, which is to say that we walked and scrambled about five miles through high guinea grass, through matted firebreaks, and treacherous felled timber, until we were panting and sweating.

The very first thing I gathered from one of Antonio's rapid-fire expositions, was that despite Nature's apparent impatience to attend to the production of flora, it was nevertheless difficult to produce food crops in the jungle.

"The soil is poor, weeds run wild, the ants eat everything," said Del Río. "We teach farmers to seed properly, fight the ant together, rotate crops, fertilize, keep the jungle pushed back. I have 18 committees working in Loreto department, 500 farmers enrolled in Iquitos district alone, 500 school children in the Youths' Agricultural Club."

"Wait a minute, please," I gasped. "How does your work tie in with this?" We were taking a breather on a knoll overlooking pasture land sprouting guinea grass already knee high. A finger wagged in a stirring motion showed that I was talking about the whole 247-acre layout.

"Oh, my farmers and school boys get seeds here. Also they can see for themselves what food crops can be grown in a sustained way. We help each other in many ways, any way we can."

I had to go over this point with Del Río a number of times. To a layman even the most careful dovetailing of the operations of various government agencies must seem like duplication, I supposed. So I kept after him, even at the risk of being considered dull.

It was well worth the risk. A very fine impression of several governmental agencies coordinating their efforts to solve critical food shortages in an area as rich in strategic materials as it was remote from the main arteries of civilization began to form. Giving it balance, depth, and solidarity was the catalytic agent embodied in the Institute of Inter-American Affairs back in Washington. And the Institute itself owed its being to a resolution of the Conference of American Foreign Ministers at Rio de Janeiro shortly after Pearl Harbor—a resolution which stated in effect that a health problem anywhere in the Americas must be the concern of all of the Americas. Out in the jungle, where the gap between food scarcities and actual hunger could not be cushioned by urban black markets, it was easy to understand that adequate food supply was definitely a health matter.

This all became very clear as we trudged over the Guayabamba plantations, growing hungry ourselves in the process. We knew that back in our little plaza restaurant we would get a decent meal of fish or meat and whatever fresh stuff happened to be in season. We also knew that there was no surplus. What if there were no combination of agencies to keep the Iquitos food hopper evenly if thinly filled? The food simply would not be there. Nor would it be anywhere nearby, anywhere within a thousand or so miles. Though not suffering consistent hunger ourselves, we had already taken note of the fact that malnutrition was the next thing to chronic in the area. To that the children attested mutely, with their big dry eyes and farina bellies.

These considerations furnished the acid with which I could permanently etch in my impressions of Guayabamba. It was not just another government demonstration farm. It was part of a hemisphere philosophy which holds that good health and nutrition cannot be guaranteed for one unless it is secured for all.

This exalted international status did not keep Guayabamba from serving a very practical purpose in the jungle community. At Guayabamba the Peruvian technicians were conducting exhaustive experiments in raising species of cacao resistant to the blight of witch broom. They were crossbreeding Brahma and Indo-Brasil cattle with the scrubbiest creole stock of the region. They were developing a cattle tick dip from barbasco bark, were experimenting with silk worms, and plantings of derris and barbasco, both of which produce rotenone. They had laid out plantations of mahogany, cedar, and other hardwoods, against the day when the jungle itself would be forced further and further back from the banks of Amazon tributaries.

But all this was only a part of their work. They also had to help feed Iquitos. Here was the high-spirited steed of theory hitched to an everyday market wagon. Here John Neale's down-to-earth methods of crop rotation, fertilization, and emphasis on food crops such as beans, rice, corn, and vegetables were proselytized freely by the indefatigable Del Río.

In return Del Río got good seed to distribute among the farmers and farm youths banded in his extension services. Guayabamba was always handy for him to prove out his arguments and exhortations to the doubtful concerning the advantages of organized agricultural warfare against the jungle. Some of these things he explained to me as we panted over the big tract.

"You can see that we can make good pasture land even in the jungle," he chirped at one point. We had come to still another knoll and were looking out over about fifty acres of fresh green guinea and elephant grass, shaded here and there by clumps of mango or avocados, the graceful breadfruit and the sky-raking oje, from which milk of huigerona and ficina powder are made. In this pasturage were sleek-looking cattle, most of them slightly humpshouldered. Wired off into a domain of their own, stood two big bulls, heads held high and challengingly in our direction, like battlement sentries of a feudal castle alerted to the presence of

some gypsy tribe. The ears of one hung from a hornless head like two huge inverted palm leaf fans. They marked him to be of the Indo-Brasil species. This bull's hump stood up like the bow of an Arab saddle. The other bull had horns and small ears, and his hump seemed to fit him better, looked more like part of his body. This, Señor Pena Alegria explained, was a Brahma.

"Their calves from criolla cows run up to one and a half times the beef weight of the uncrossed criolla stock," Pena Alegria said. "The crossbred cows give more and better milk, too. They thrive here.

"And," he grinned, "all we have to do to get them plenty of good pasturage is to clear the jungle from the relatively high knolls and hummocks. The river never floods these, even in high water."

We went on to witness the clearing process so airily described by our livestock expert. We found a gang of men wielding machetes to cut narrow tunnels into the jungle wall and then swing to cut back vine and bush in slowly widening circles. Axe men followed them into these "clearings," to fell the cedar, quinilla, bloodwood, lancewood and the whole host of tropical trees—hardwoods for which a Yankee home craftsman would give his eye teeth.

It was grueling back-breaking work. Axe men stood waist deep in the debris of lesser growth to hack away at the larger, tougher boles of the towering trees. To drop an eight-inch "cedro macho," or hard cedar, took about the same time and considerably more sweat than would the felling of a two-foot poplar back in Virginia. And there were no powered chain saws or saws of any kind for that matter. Hand or portable power saws, I learned from Señor Raitegui, fared ill in the jungle. Often the wood was as hard as the tempered steel, or nearly so, and abrasive tools hard enough to sharpen especially tempered cutting implements simply were unavailable. All in all, portable logging machinery, especially the wartime cutting steel available on the market, was just not up to the job of subduing the jungle. The hand axe, machete, and tireless backs and arms of jungle woodchoppers had to serve.

Amazonian farming, our agricultural friends enthusiastically explained, was full of other quirks, demanding the ultimate in close

observation and patience. They had learned, for example, to make a careful distinction between "tropical" and "equatorial" growing. Señor Crespo recalled that at Guayabamba they had found that the silk worm, which takes thirty to thirty-three days to come to cocoon in "tropical" São Paulo, Brazil, would begin the same process in "equatorial" Iquitos in twenty-seven or twenty-eight days. Seed corn which would require ten days to bud in São Paulo, would do it in three days in the upper Amazon. Crespo said similar differences in budding ranges existed for most agricultural products subjected to the upper Amazonian climate. Climate itself had its Amazonian peculiarities. Old Man River was the dictator of seasons. When the river and its thousands of tributaries which reached back into the rain forests of the eastern Andean slopes swelled and overflowed their banks, winter would descend on the department of Loreto and the rest of the upper Amazonian basin. My field maps gave us only a hint of the well-nigh incomprehensible size of this basin. Marginal data indicated that Loreto alone embraced 192,000 square miles of rivers and lagoons, and smothering green stuff. From our relatively high clearing the thick covering rippled only slightly here and there, as far as we could see. It looked like a limitless green blanket, slightly mussed from an afternoon nap.

As for the rest of the upper Amazonian basin, we did not even try to guess at its size. The maps merely showed this great waterway stretching many fingers out from Manáos, Brazil, more than 1,000 miles east of Iquitos, toward Venezuela, Colombia, and Ecuador in the north and northwest, Peru in the east, and Bolivia in the southwest. Later, I cut a piece of flimsy in the shape of a folding fan and placed the apex of its angle on Manáos, so that the open arc would curve inside the Andean cordillera from the Vaupés River in Colombia to the Beni and Mamoré rivers in Bolivia. The fan roughly covered all the many Ecuadorean and Peruvian Amazon tributaries in between. Then I placed the same fan with its hub at Brownsville, Texas, and with its arc running northwest, north, and northeast. The fan covered all of Texas, and great chunks of New Mexico, Kansas (it embraced St. Louis), Arkansas, Mississippi, and nearly all of Louisiana.

"We usually figure on winter as coming between March and

June," continued Crespo. "That's when we are likely to get the *frios de San Juan* (the cold south winds of St. John). The thermometer will go as low as 15 degrees. Our average is about 28 degrees, and sometimes in the summer, or between July and October, will go as high as 40 degrees."

This I put down as he said it, but later I had to look up the conversion formula to change his Centigrade to our Fahrenheit reckonings. After some travail with division and multiplication I finally noted that the average temperature in Iquitos and general area was 82 and a fraction degrees, Fahrenheit, but with the winds of San Juan could get down to 51 degrees. In summer, I took it, the temperature could hover around 104. While we were in Iquitos we had exceptionally fine weather, or at least so the Iquiteños said. I noticed with amusement that their attitude toward the weather contrasted strangely with what has come to be known as the California psychology. Iquiteños were inclined to regard high temperatures and high humidity as part of the general scheme. When we remarked that we found it quite comfortable we were earnestly assured:

"Yes, but that is unusual for this time of year."

"When the river floods in winter," continued Señor Crespo, "we become amphibious. We almost grow web feet. Only the higher ground is above water. That is the reason we try to reserve it for pasture and orchards. We grow the quick vegetable crops on the bottom lands."

He made a sweeping motion with his arm toward the horizon.

"Then, this is nearly all water. Trucks are not much use. You can go no place except by boat or canoe. The Indians either retire to high ground, or build their houses on rafts."

This brought out something that had been trying to define itself in the back of my mind. I realized what it was that I had been missing. It was the absence of vehicles. Outside of our jeep and the Guayabamba truck we had seen nothing on wheels that morning. As a matter of fact, excepting the nondescript scrub pony which carried the water supply in loosely lidded cans to our restaurant, we had seen no equine work animals, or draft carts. Crespo's words and gesture made it all understandable. Why vehicular traffic, indeed, in an inconceivably large network of

gloomy waterways? Where one went, if one went at all, by water. All manner of small craft crowded into my mental picture of the region, filling up the vacuum, and making the idea of an amphibious existence seem all very logical and orderly.

"At Quista Cocha, Tamshiyacu, there are other farms like this, run by the Army. They produce yucca, cashew, bananas, tomatoes, squash, cabbage, all kinds of vegetables . . ."

By this time we had reached a tacit agreement whereby Del Río would pause and smile if I held up my hands, notebook in one and fountain pen in the other. Then I could catch up with the notes. He spelled out Quista Cocha and Tamshiyacu for me with the usual Spanish incomprehension as to why I had to do it by letter instead of by syllable. We passed over quickly my explanation that English words, unlike their counterparts in Spanish, are frequently spelled very differently from the way they would sound in a Spanish diphthong arrangement.

"So the Army is in it at these places?" I inquired.

"Yes."

He went on to explain that the Peruvian government had put a new twist to the Napoleonic soliloquy on an army and its stomach. Instead of living off the countryside, the Peruvian jungle garrisons, with the aid of John Neale's cooperative food service, had taken over farms at Quista Cocha (494 acres) and Tamshiyacu (61 acres) and were developing them not only to feed the troops but to help supply fresh food in the garrison towns and Iquitos itself.

"It certainly is an 'integrated approach,'" I confided in Sam Davies. "Here is Antonio, who can travel thirty days without reaching the end of his territory, distributing seeds and technical advice to farmers, and bringing them in when he can, to see how things are done at Guayabamba and the other places. The ministry of agriculture is producing things for food, not just for show at Guayabamba. And the army is teaching its men to help feed, not just live off the garrison community. That's coordinated concentration of your fire power on one target, bearing down with everything you've got. That's your 'integrated approach.'"

"Something like that," yawned Sam. "Come on, let's get back to town. I'm hungry."

Del Río had other ideas. All of us, including the Guayabamba technicians, piled into the jeep and the Guayabamba truck and headed down a slippery sand and clay track. Once more the heavy overhanging wilderness enveloped us. We drew up at a compound boasting two large thatched buildings the walls of which were heavy cane—the “xaña brava”—of the Amazon. They were staked in vertically to the ground and laced to supports with rattan. One of the large buildings was the home of Señor José Cruz Araujo, secretary-treasurer of the Farmers' Association of San Juan. The other was the community school. A few long-necked, sparsely feathered chickens scratched at the bare soil of the compound. At one side of it, occupying the space of about half a small city lot, were a few leafless, seared-looking orange trees. Off to the right, however, were flourishing specimens of citrus, avocado, and other fruit trees.

“What happened to them?” I wanted to know, pointing to the orange trees. “The children? . . .”

“No, no, no, no,” said Antonio with superhuman patience, “the Curhuince. He'll tell you.”

We met the secretary-treasurer, a husky man with straight black hair, black eyes regarding us steadily under a strongly boned forehead, and with skin burned a deep coppery brown.

“What a disaster,” I said by way of introduction, indicating his stripped orchard.

“One of our own making,” he smiled. “Come, I'll show you.”

Arming himself with a long-handled spade, he walked to what looked like a mole hill, scuffed aside the heavy saber grass and began to dig. After a few tentative thrusts, the spade broke through an outer crust of sandy soil.

“There he is,” exclaimed the farmer. “The sentry! Look at him dig.”

I followed the point of spade and saw a huge red ant, about the length of a second finger joint, trying to dig through the debris left by the shovel thrusts.

“He's trying to warn the others. Watch!”

He thrust deeper with his spade and still another crust caved in on a hole the size of a small potbellied iron stove.

“Look!”

I looked. A small volcano of the red ants was overflowing the pit. I could have sworn they came out in combat formation. At any rate, whole companies of them started to crawl over our shoes and up our trouser legs. Stamping and slapping we retired to a safe distance. Our farmer rumbled one of those detailed, all-embracing Spanish oaths. Here, apparently, was enmity of long standing.

"I've fought the damn' things for years," he explained. "But I never got anywhere until he"—a nod indicated Del Río—"brought in blowers and organized the general campaign. Before that I'd get them cleared off my place, but they'd come from the next farm. That happened to all of us.

"Now we are all working together, and with this little weapon, we've got them licked."

The "little weapon" was a miniature flame thrower, built on blowtorch lines. It carried a tank within one man's hefting power for a mixture of arsenic and sulphur. Cruz Araujo explained that Del Río had organized his neighbors and himself into teams to search out and destroy the saber ant nests with this lethal flame thrower.

"Not even a curhuince can take it," Del Río beamed. That I could well imagine.

"But why all this?" I wondered, gesturing toward the withered orchard and the obvious cause of its decline.

"Oh, that!" grinned Del Río. "That's Don José's own idea. He leaves a few nests here and has sacrificed these trees, so that farmers in his association can see for themselves just how much damage the ants can do unless they are fought patiently and mercifully."

"Now you must see the school and the school garden, then we can eat."

Del Río was plucking at my sleeve. We walked to the other building and around its side. At the back were rows upon rows of carefully staked-out garden beds. They weren't dug beds. They had been piled on the hard sand and soapy clay floor of the clearing and flattened out between hardwood poles bound together in rectangular form.

"This stuff is no good," said Del Río, kicking at the packed

flooring of the compound. "All its growing power has been washed out or baked out by river or sun. The children have to bring fertile soil from wherever they can find it to build up their garden beds."

We moved closer to the laboriously scraped-up beds, as excited chatter broke out in the schoolroom at our backs. Between the poles we saw healthy sproutings of radishes, carrots, tomato vines, and other fresh garden produce.

"The children are awfully proud," said Cruz Araujo. "They started these things as victory gardens, and are continuing them as part of their education. With Don Antonio's instructions and with his seeds they produce about a third more stuff than they did when the garden campaign first started. Now they are learning—all of us are learning—such things as soil nurture, crop rotation, community campaigns against ants and other insects. The days when the Indian farmers would burn off a few meters of bottom land, scrape out a few crops, and move on are gone, even in the selva [jungle]. That is good."

We were interrupted by a burst of song and wheeled to face the group of children. They had quietly filed out and formed ranks to sing for us. Their teacher, a pleasant looking young woman with an Indian cast to head and features, led them in a spirited march tune. It was a stirring song with a definite lift to it. Piping voices faltered over some of the high notes but swelled in the middle registers with lyrical allusion to the soil, the home and the native land. We applauded and waved vigorously as we moved off to our vehicles.

"Did you notice . . . ," I started to ask Sam, who had decided to ride back on the open truck with me.

"I sure did," he grunted. "I'll be dawggoned. What was that thing they were singing?"

"No . . . wait a minute," he silenced me. "It was that song that Rudy Vallee used to sing so much . . . the Maine Stein Song. Damn the radio anyhow! I hope it's not going to start a race of crooners down here!"

We both chuckled. At that particular moment, the school compound of jungle-girt San Juan seemed far from soft suburban ease with a radio in every home and a crooner to irritate father.

We were hungry enough to feel slightly silly by then, and we visitors had taken turns at pretty poor jokes as to the stomachless qualities of our friend Del Río. He merely smiled. Very soon we found ourselves apologizing in a somewhat chagrined manner. For Antonio had his own ideas about how to treat visitors. He brushed aside our plan to return to our restaurant, took us to his home, and sat us down to a banquet.

Señora del Río, a fair young Lima woman, had already fed her two young children. Without intention or need of apology for backwoods hospitality, she led us to the feast. The table was set in the back part of the house which did double duty as dining room and patio. Two sides of it were open on a small court. The ceiling, which served as insulation from the sun beating on a sloping tile roof, was at least twenty feet from the cement and tile floor. A half-partition separated the big dining patio from a serving pantry, and beyond that was the kitchen, with the classic charcoal oven and grate of Spanish Colonial America, set a little more than waist high in glazed red tiling.

"I think you must be ready for a little food and perhaps a little drink," Del Río shot at us, as we goggled at the layout. Bert, always cool and collected, gave the proper answer, and without further ado the meal was underway. The cocktail was nameless—"just something we mixed up"—as Del Río put it. Its base, however, was Pisco, and its effect, to use Sam's words, was "that last honing stroke to a razor-edge appetite." There was also white and red Peruvian wine, which Bert and Sam pronounced wonderful. I was regretful, then glad that I was not drinking, because I had work to do that afternoon and the breeze rustling in fronds of patio palms, coupled with the delicious smells coming from the kitchen, was already making me drowsy.

The smells were followed by the food itself. In it came, one succulent dish after the other. Soon the table was loaded. There was chicken, deeply browned, and yet not fried. I wondered if it was of the long-necked variety we had seen that morning, and somewhat to my surprise it was.

"They are not bad when fixed this way," said Señora del Río. She had brought about the tenderness by morning-long basting with white wine. "It's almost as much of a stew as it is a roast,"

she explained. This cooking assault on the tough jungle bird had rendered it truly delicious.

There were side dishes of yucca garnished with garlic sauce, heaps of rice cooked with chopped onion, tomatoes, squash, salad of avocado (palta in Peru), lettuce, cucumbers, and more tomatoes. Black, black coffee and a rich custard ended the meal. And we had been served with larded white French bread and rich butter throughout.

It was too much! We were barely able to thank the gracious Señora del Río and drag ourselves off to the hotel. In that palatial hostelry with its battery of hygienic services at the head of the stair and its windows looking over the river bank, that is to say the city garbage dump, we were ready for siestas despite the riveting hammers which were busy on the steel skeleton of a new tourist hotel being erected just alongside.

The siestas were sweet—but short. Dr. López seemed to think that we had devoted altogether enough time to food supply and to its disposal. Promptly at three o'clock he was knocking at Bert's door just across the hall from Sam's door and mine. As senior member of the party Dr. Howard had the best room, a corner establishment with a fine view of the waterfront and its flocks of scavenging, blue-necked gallinazos (buzzards), and the new hotel going up right outside his window. He also had the only basin in that wing with running water. So with fine disregard for any detached loneliness visited upon him by virtue of command, we made his quarters our office, lounge, and washroom.

It was a busy afternoon. Sam and I walked in with López when Bert opened the door, one skinny leg half in his trouser, the other completely bare. We splashed the sleep out of our eyes and filed right out.

We went to Dr. López' office where he told me about public health problems in Loreto, and where I began to feel how paradoxical were most things connected with Iquitos and its setting.

For example, there I was in a country more abounding in lagoons, bayous, and stagnant backwaters than the Mississippi delta, yet I could not contract malaria without importing it from the outside. I had been wearing oxfords, and the jungle mosquitos had almost literally sawed my feet off at the ankles. But Dr.

López explained that none of them had gray wing tips and the ludicrous habit of standing on their heads when biting, a three-point landing technique that marks the malaria-bearing anopheles.

Only in the virtually uninhabited zones of the Putumayo, Pastaza, Morona, and Yavarí rivers, all coursing into Peru's great "oriente" or eastern limberlost, had malaria been found, and then infrequently, said Dr. López.

"On the big, more populous waterways," he said, "the anopheles vector has been absent so far." He traced the meandering of these rivers through the gigantic, steaming no-man's land, calling them by name—"the Ucayali, the Huallaga, the Marañón, and the Amazon into which they all flow."

"But colonists could easily bring it in," Dr. Bert interposed. "Then there would be hell to pay. We are setting up plans for mosquito surveys, and other methods for eventual malaria control. This region is bound to open up, and we want to be ready to act the minute malaria shows itself."

Dr. López was equally ruthless concerning my suburbanite's ideas of safe harborage offered by such great inland waterways to typhus and typhoid.

"Typhus and typhoid are almost unknown out here," he said. "You're all wrong about them. They are slum diseases. Of course, we have lots of rats and other lice-bearing vermin, but they are wild, forest creatures. That's for typhus. Typhoid does not seem to get far out here either, even though many people are not what you would call 'modern' in the way they handle food. But we have no great milk, or food, or water distribution systems to become infected as you do in the big cities in the States. So far, we have escaped typhoid. As to amoebic and bacillary dysentery, cases of them are extremely rare."

Then came more contradiction for my preconceived notions. Tuberculosis, which I had always thought of as a cold climate disease, had a high index figure in Iquitos and other of the more populous towns of torrid Loreto. And then, less surprisingly, Dr. López said that yaws was quite common among the children, and intestinal parasitosis in its numerous forms was a general curse to health and productivity.

"All those women and girls you have noticed tell the story,"

Bert cut in. I had made some facetious remark during the day about the evident abundance of prospective mothers in Iquitos. "They are not all pregnant. They have intestinal parasites. Right, doctor?"

"Definitely," said Dr. López. "You must talk to Lara about this. It is one of our biggest campaigns."

We repaired to the health center to talk to Lara.

There is a certain stark honesty about women who are seeking or doing something for their young, a singleness of purpose which commands immediate respect. I had felt its impact on previous visits to health centers in Mexico and in Lima. There the women were of cities and towns and of a distinct metropolitan cast. That they should lay aside mannerisms and attitudes varying from simulated modesty to archness seemed laudable considering surroundings which could not fail to keep them in daily contact with some of the artificialities of civilization. I had taken it as one of those devious tributes to civilization itself that the metropolitan health centers seemed to have established themselves as special places where all sham could be dropped and where people, especially mothers of families, could go with their most pressing personal health problems and be sure of wise, disinterested guidance.

I had expected no such forceful transition from the false front to the real on crossing the threshold of an Iquitos health center. After all, what could be more down to earth and of the earth than the lives led by the humbler folk of this jungle town. Yet the difference was there, as obvious in the tribal and mestizo women of the Amazon as it had been in the mothers, young and old, of Lima, Vera Cruz, Mexico City, and the thriving communities of the Mexican-United States Border. They were simply not the same women on the street as they were the minute they brought their children to the Iquitos health center, wrapped in shawls or led by the hand. A possessiveness for everything the health center had or could promise seemed to sweep over them, and I got the impression that they abandoned themselves to it with an intensity verging on the predatory.

Among these women, some of them ill clad and ill shod, moved Dr. Lara. In his early thirties, and in my judgment too good looking for his own peace of mind, he struck me at first as being rather

too perfect for the outpost setting. Later, I came to admire him as much as it is possible to admire a man without fully understanding him.

Lara looked a good deal like, and had the boyish appeal of Richard Barthelmess, idol of the latter day silent screen. He was a dashing figure in the creamy white evening linen of the tropics, and could dance all night, drink like a gentleman, and not have a hair come out of place or an unseemly flush tarnish his lifeguard tan. And as a graduate of San Marcos University, in Lima, and a post-graduate in public health at Johns Hopkins, there seemed to be little reason for him to bury himself in the jungle.

But Dr. Lara went to the jungle. And he was anything but a missionary type. Furthermore, I had it on good authority that he hated the jungle, had been broken up over leaving his Baltimore wife at home during his tour of jungle duty, and was constantly concerned over the possibility of contracting leprosy or yaws, or one of the other diseases of the region. Yet he felt it his duty, following the United States training in public health provided in an Institute scholarship, to take on one of the toughest, and most monotonous jobs offered by the cooperative health service in Peru. That was the part I could not help but admire. And, of course, I came to like his quiet, pleasant way of putting a good-humored complexion on things, grew to like Lara himself, genuinely.

We found Lara, as usual, busy. As a matter of fact it was commonly noted in Iquitos that his health center was one of the city's busiest spots. There Dr. Lara and his staff attended an average of 130 patients daily. Helping him were two doctors, two graduate nurses and sixteen auxiliary nurses.

"We do double duty here," he explained, between answering questions from the busy young women of the crowded place. "Our people count on us to help cure them of long standing maladies, as well as to show them how to prevent illness. We are really a curative clinic as well as a health center."

We moved about among the patients, most of them youngish mothers with babies slung on their back papoose style. Here and there was a sloven, of course, but I noticed that most of the women, though clothed in modest raiment, were clean. I also

noticed that the disheveled and dirty among them came in for some pretty sharp lectures by Lara's starched young nurses.

We moved out to a covered patio similar to the one that Antonio del Río used as an open air dining room. Apparently this was a stock part of Iquiteño housing, as common as the old front lawn and porch swing back in the States. Here the women were lined up, waiting their turns to get to a dispensary shelf, or bar, laid in the half-partition. Behind the partition, in what would have been the pantry of the old house, was a doctor doing double duty as prescribing physician and pharmacist.

"I'll bet you have a sweet time getting down to the real facts of life with these women?" I ventured. "No, you are wrong!" Lara replied. "I admit I thought the same at first. It seemed likely that women out here, especially the Indian women, would have difficult attitudes toward modesty, would be secretive and make our work harder.

"The fact is that of all the things the health center has to offer, the most eagerly sought and most carefully observed, is our informational campaign on the control and prevention of venereal disease. We have had a clean-up campaign in it, too. Again the women, particularly the prospective wives and mothers, have been the first to make sure of themselves and their children in this respect.

"To be accurate," he continued, "we have to recognize that it is the women who contribute most to our health center activities. We can never quite catch up with the mothers who flock to this place for prenatal and child welfare consultation. We simply must have a larger place to work. And you should see how they attend showings of our health films [Walt Disney's amusingly best]. They continually ask for more health circulars, and newspaper articles, and they invariably overflow the schools and clubs where we give lectures. They keep both the hospital and health center personnel busy all the time, as well as the fifteen Army, Navy, Airforce and private doctors of the city.

"One could not ask for a more responsive community," Dr. Lara admitted. And, then, a little sadly, "nor one where so much of the work is from the ground up."

Once again I felt that I had brushed the very finger tips of a

cooperative system whereby my own country in common cause with others of our western world was seeking to help people to help themselves. Surely the ever-probing fingers of a helping neighborly hand, could go no deeper into the heart of the South American continent than to this gigantic water shed for one of the world's greatest rivers, to this only partially appraised factor in basic economy! To find them warm and pulsing with life at their extremities was a discovery I felt should be reported back home instantly.

All this flashed through my mind as I scribbled rapidly in my notebook. Dr. López was making impatient movements toward the front of the building. I managed a seat in the jeep, among a stack of extra long legs from Boston and Little Rock, and we jolted to the outskirts of Iquitos and the Servicio Hospital.

This, indeed, would have been a nice place to recover from dysentery—or even soroche. Wide spreading and low, its wings embraced a lawned quadrangle, where there would be shade for the walking or chair patients, morning and afternoon. Dr. González and Mrs. González, who was head nurse, greeted us. Mrs. López was there, too. Quickly we went through the hospital. An operation on a hernia patient was coming up, and there was not much time for visitors.

We noted that the hospital was built on one level with bungalow-type roofing that let in plenty of light but excluded direct rays of the equatorial sun. Everything was brand new and polished to a degree that made me feel that even the undersides of the walls must be clean. We went into the children's ward, found beds and patients as clean as children can be anywhere. As we came out the main entrance after our complete swing of the complete little hospital I was struck by the contrasting world beyond. There was a muddy rutted road fringed by some rundown "caña brava" houses, chickens and hogs were scratching and grubbing around front doors. Beyond that was the jungle.

"How much of a gap is there between this and that?" I asked Dr. González, seriously. His answer was just as serious.

"A big one, we hope. Probably it is the most emphasized part of our student interne and nurse training, this question of cleanliness. We know the atmosphere here is not helpful. It is easy to

let things slide along in the jungle. But we must not have it happen here."

I wondered. One thing seemed inevitable. The bright newness of the establishment must fade, even its antiseptic smell must eventually be blunted by the aroma of age. I knew that the indefinable atmosphere of advancing time could not be kept out, not even out of hospitals. I had only to recall some of the venerable establishments in Washington to prove that point. And I wondered if this fresh hygienic zeal would retain its fine edge in a jungle atmosphere where rot and rust set in all too quickly. Like Dr. González, I hoped that it would, felt that it must.

González, like López, would give me very little time for musing.

"The great need," he was telling me, "is to prepare people here who are willing to stay here." Therewith he phrased a thought I had found to be current among Iquiteños. Iquitos, it seemed, was boom-wary, and boom-weary. Too many times, as for example during the recent war, the old tiled city had been wooed by searchers for black gold (rubber), barbasco, chinchona, oil, hardwoods, carnauba wax, and other resources brought into sharp market focus by distorted international affairs. In all candor, the older residents of Iquitos were a little tired of transients. They would rather hear less about quick riches, more about steady, even if modest, development of Amazonian resources.

"I have been working with Dr. Howard to try to develop staff people from Loreto," Dr. González continued. "That is the only way we can be sure of developing public health programs in the future. Limeños [people from Lima], or those from the mountain cities, or anywhere else in Peru, for that matter, have a terrific problem of adjustment out here. As soon as the novelty wears off they are just as likely as not to come down with cafard."

"What . . . what's that!"

"Cafard? You must have heard of that, if you've ever been in French Morocco. Or in the Philippines. Out there they call it 'running amok.'"

"Oh, sure. Now I know. The Marines in this war called it getting 'slightly Asiatic.'"

"Yes. It is a deep neurasthenic melancholy. It is the spirit of the

jungle itself . . . impenetrable, hopeless, brooding. Nearly everyone from the outside gets it to one degree or another after being here awhile. I have made studies of it and we are trying, Doctor Howard and I, to work out shorter schedules for hospital staff people from the outside. As it is now, with the general shortage of trained public health nurses and doctors in Peru we have to require at least a year's term of service for people sent out to us.

"But that is only stop-gap procedure, of course. We must build upon people of the region, people who are geared to this ceaseless fight against the jungle, people who love their country, and particularly this part of their country. You'll see some of the young nurses we are training. Dr. Howard is going to present them with their nurses' emblems after the operation."

"They are all from this region," Bert broke in, "and you might take note too, Ed, that we are sending both Dr. and Mrs. González to the States for several months, as soon as they can get away, to pick up the latest techniques developed for training nurses up there. We want to give these girls as good a start as possible. They have a lot to do."

"But what about this cafard, this running amok?" I want to know. "You mean to say it's inevitable, a part of the climate, like sunburn, or spring fever, or something like that?"

"No," Dr. González grinned. "I don't think we would ever be troubled with it if we had more noise. People who come out here are used to noise, a lot of activity. Then they are plunged into the monotony of the jungle. The adjustment is difficult, hard on the nerves. Some people crack."

He went on to explain that he believed cafard to be loneliness which takes on some of the baffling mystery of the jungle itself. The cause—maladjustment to the utterly primitive. The cure—sounds of civilization. Industrialization, clanging, hammering, battering at the mute portals of the wilderness. Paved roads, automobiles, street cars, and busses; telephones, sports, and pleasure parks; theaters, cinemas, hotels, lecture halls, and clubs. More social activity to season the constant war against the jungle during the day. More places to go at night!

Then Dr. González remembered that he was a surgeon as well

as a psychologist and went off to attend to his hernia operation. We had a few moments before Mrs. González could be released to attend the nurses' ceremony, so Bert and I went inside to brush up for it.

Soon we were summoned by a hospital auxiliary and went to the lecture hall. There I took a chair against a side wall where I could watch the proceedings. Bert took a chair by the speaker's table. The auxiliary nurses—young girls just reaching or just past their twenties—came in single file behind Mrs. González, each carrying an unlighted candle. They seated themselves quietly while Mrs. González welcomed Dr. Howard and gave a brief, forceful talk on the responsibilities which they were about to assume, and which she warned them would "cover a long and hard road." Then she turned to Bert.

Something had happened to him! His cream-colored slacks and open-necked white sport shirt covered the same lanky, deeply burned, Bostonian of the easy noncommittal manner who had been our intimate companion of the past two days. But a certain irradiant quality had been added. As he rose to talk to the girls, there was no pomposity, but he did contrive to invest the whole procedure with a sense of high resolve. This could have been a graduation ceremony complete with a *Te Deum* echoing through the everlasting forest, but Bert's words were simple, dignified. His manner brooked no misinterpretation. Tall, blade-like, and easily erect as he faced the auxiliaries, he looked indeed the uncompromising challenger of ignorance, poverty, and disease.

"Your profession is a noble one," he assured the girls. "You are responsible to it. You will find it necessary to put all you have into it. At all costs you must maintain its prestige."

I looked at the girls. Their head nurse had put the symbolic flames to their candles just before she called on Bert to speak. The tapers flickered and guttered. Not so the light in those many pairs of brown eyes and black. That light was steadfast, even though some lids were suspiciously moist.

My thoughts reverted back to my worry about maintenance of the bright edge of cleanliness and efficiency in the hospital itself. The worry and uncertainty had disappeared.

"It will be a long, long time before these kids forget the way Bert put their jobs up to them," I whispered to Sam. Sam could always go me one better.

"Hell," he replied huskily. "It will be a long time before I forget it myself."

SOMETHING NEW ROUND THE BEND

DOCTOR HOWARD and Davies were busy with administrative matters during the next few days, and I was left more or less on my own. I welcomed the break, mostly because I wanted to see Iquiteños who were not a part of the cooperative programs. I was pretty thoroughly convinced of the disinterest of the personnel of the cooperative programs, and I had to believe such people as Dr. González, for example, when they said that aspirations for harnessing the resources of eastern, or Amazonian, Peru, must be predicated on stamping out the strength-sapping diseases and malnutrition of the region. This, of course, was public health doctrine, familiar to anyone who could read the papers back home, and who, educated by one public health drive after another, had come to regard the periodic drain on his pocket-book in the health interests of the community as much a part of life as having to put up his screens against summer insects.

In the jungle I soon realized that this humdrum doctrine was smack up against primitive resistances, not only the primeval obstructionism of Nature itself, but the superstitions, incompatible folklore, and sometimes the downright inertia and lethargy of the human beings it sought to relieve and stimulate. In these conditions it was natural that cooperative health service and food supply technicians would have to draw on something considerably deeper than the sort of professional zeal that would permit them to hold and do their jobs acceptably. It only took a few days of living in Iquitos to convince me that the men and women

who faced month after monotonous month of it, must draw on some indomitable force which allowed them to see over and beyond the immediate job in hand. My temptation was to endow these men and women with the qualities of Livingstone, Florence Nightingale, General Gorgas, and the winsome WAC of Shangri-la. My job was to find out whether they were doing any good.

I decided that the objective approach was in order. Besides, there were a couple of men I wanted to meet.

One was Father Avencio Villarejo, Spanish priest who had penned thirteen years of carefully documented experience into a book—*Así Es la Selva (Thus Is the Jungle)*. The other was Rafael Hernández, acting mayor of Iquitos.

Father Avencio I found in a tiny and hot cubicle of an office in the church vestry, pecking away with two fingers on an ancient and battered portable typewriter of American make. This could have indicated that United States commercial interests were well in hand in this uppermost Amazonian port, but in my mind it failed to balance out the fact that the only non-Peruvian shipping office I had seen in Iquitos had its home berths in Liverpool and London.

Father Avencio greeted me in the type of Spanish that pronounced him Castilian. Slightly more than medium in height, his head was bald enough to obviate the necessity of a tonsure, and his thin face with luminous hazel brown eyes, showed student pallor. Yet his book indicated that he had ranged farther up the many Amazon tributaries than any man in Iquitos.

"I was told," I began, as he waited for me to state my business, "that you know more about the flora and fauna and Indian tribes of the upper Amazon than any man living."

He smiled.

"That is the way people talk when there are few to write down their observations as they go along," was his modest reply. But I could sense his gratification. The fact that people appreciated his tightly packed volume detailing information of Indian tribes, animal and plant life, and data as to climate and waterways in a diocese which ranged far north to Ecuador and Colombia and southwest to Brazil, obviously gave him pleasure.

In a moment we were deep in a discussion of the upper Amazonian tribes. Father Avencio, it appeared, had taken the crucifix and Bible among the most remote, the most savage.

"But around here they are all civilized or semicivilized," he said. He named a few, like Cocamas, Quechuas, Jíbaros, Záparas, Orejones. "Those are only a few of this immediate surrounding region," he said. "Possibly you'll see some Orejones. They put discs in their ears to make them large. Then you may see some occasionally with gray scars on their faces. That's a sort of facial tattooing that is dying out.

"No, most of the Indians nowadays are civilized. They are timid, and somewhat restless, but you need not fear their blowguns. The only ones I know of that are still uncivilized are the Mayos, Mabas, and Marubos. In that order they inhabit the banks of the Gálvez, Tapiche, and Tahuayo rivers. These are relatively small rivers deep in the jungle. The Indians are completely savage. They don't like white men and they steal women and firearms from other tribes whenever they can.

"But they are disappearing fast. According to my calculations there cannot be more than two thousand left." He told me that the last raids by these predatory tribesmen had been reported at Requena in October and December of 1942. Something of a swan song flare-up, I gathered, because since then Requena had asked that its cooperative service sanitary outpost be expanded to include a health center. This would indicate civilization on the march in that region.

"But superstition dies a much more lingering death than savagery," Father Avencio ruminated. "And among our 'pobrecitos' [our poor little ones] there is altogether too much superstition."

He told me of one tribal custom when, at approaching childbirth, a woman would go to a selected woodland spot to have her baby in complete solitude. If anything happened, there she died. If all went well, she returned to her hut on the very day of parturition to reassume her complete burden of chores. Another custom, as he outlined it, required complete isolation of a woman for at least fifteen days, should anything go wrong during her

labor. After that time, or at any time during the period that medicinal attention might force its way past tribal barriers, the delay would make any sort of assistance difficult indeed. Father Avencio also spoke of whispering campaigns usually traceable to peddlers of home remedies, untutored "curiosas" or midwives, and self-appointed doctors. I had heard about these, also, from Dr. González. The profit motive would naturally tend to keep them from fully endorsing public programs designed to prevent disease. This was no new thing in preventive medicine, according to notes of mine taken from Dr. Richard Plunkett and Clarence Sterling. Dr. Plunkett and sanitary engineer Sterling shared the direction of the Institute's Health and Sanitation Division back home. Both had assured me that obstructionism, of a sort that could rival any I might find on my trip, was still fresh in the memory of public health officers in many parts of the United States.

"So fresh," as Dr. Plunkett put it, "that some of the suggestions we make to overcome this same deterrent in some of the cooperating countries could almost be labeled new discoveries. Motion-picture health reels, for example. That method of winning the public is so new, relatively, that we can offer it to the hemisphere almost as soon as we can fully cover our own country. From all reports it is enormously popular in the other republics, too."

Father Avencio and I talked of Walt Disney's amusingly graphic methods of carrying simple disease prevention techniques to any community boasting so much as a sixteen-millimeter projector. When the Institute was under the Office of Inter-American Affairs, Nelson Rockefeller had asked Disney to work out some skits carrying the message of good hygienic practice in a way that any man or woman of humble means could understand. The result was a series on what Pablo or Juan, or anybody in rural Latin America, could do to prevent the spread of such common energy destroyers as hookworm, whipworm, and their many cousins, and the more lethal diseases like malaria and tuberculosis. He also did some films on nutrition, depicting the why of a few simple rules concerning proper feeding of young children, infants, or women in gestation. Using the technique that has endeared Donald Duck and Pluto to millions upon millions the

world over, the Disney studios turned out health tracts that were sought after wherever I went in Latin America by the rich and poor alike. They were "simpático," which is translated in Appleton's Spanish-English dictionary as "sympathetic, congenial, winsome, pleasant, 'nice,'" and which anybody who has ever tried to think in Spanish will agree means all of those things and something more which escapes translation by any single English word. The nearest I had ever been able to come to it was that a person called "simpático" was a genuinely good sort, free of presumption, and capable of inspiring warmth and friendliness.

But I was not taking up Father Avencio's afternoon merely to engage him in pleasantries concerning the action programs of the Good Neighbor Policy.

"Do you think these programs are getting anywhere?" I came out with it bluntly.

"Oh, they are doing excellent work. There is no doubt of that. But the 'pian,' the poor people in the wilderness. That is really awful."

"I don't quite follow."

"Well, I should not criticize. But it seems to me that much could be done to educate the teachers to treat 'pian' and some way should be devised so that even the most remote Indians would know enough to seek real cure. As it is they are prey to anyone who happens along with a palliative."

"Pian" is the Spanish name for yaws. A spirochete infection, like syphilis it causes repulsive sores and eating away of mucous membrane. For all his hardihood as dugout traveler and jungle pastor, Father Avencio actually shuddered when he spoke of it. I made a note to tell Bert Howard that this earnest student and preacher, who was spending the best years of his life in these wilds—I judged him to be in his early forties—thought that the Loreto health activities should penetrate deeper, still deeper, into the steamy fastnesses, some of them known, possibly, only to Father Avencio himself.

It appeared that I had hit the dead-end of objectivity concerning the programs, as far as my Catholic priest was concerned. In his view, apparently, the worst thing wrong with the cooperative programs was that they needed amplification and expansion

to take in still uncovered territories and services. Or, to phrase it more simply, the only thing wrong with the projects was that there were not more of them.

Across the ample Plaza de Armas from Father Avencio's church was the municipal building, an imposing, businesslike structure in anybody's town. I walked over to it following the wide walks of the plaza past the ubiquitous bandstand, and through tropical foliage which showed lack of water. In the mayor's second story office, with its picture windows commanding angle views of the centralized life of the city, I was met by acting-mayor Hernández. He was young, good-looking in a keen, intelligent way. His gestures were sharp and eager. His dark eyes seemed to be forever at the smoldering point, ready to spark fire at the slightest upward draft in the conversation.

Yes, he was aware that the United States had made common cause with Peru in the matter of helping residents of the upper Amazon to a slightly higher, more productive way of living. That was as it should be. After all, one could not expect Loretanos alone to absorb the shock of the big wartime drives for the products of the jungle—the rubber, cocoa, rotenone, carnauba wax, hardwoods, and petroleum, so vitally needed by the United States and the United Nations.

"What was here during the war was the property of the United Nations," Hernández ripped out. The tempo of his conversation was in direct contrast to the sleepy scene from his windows. The quiet church across the way; the Iquitos club, a couple of white-clad figures bent over a card table on the veranda of the first all-steel building of the world which oddly enough was brought all the way from England early in the century, and during a former rubber boom; the Officer's Club; Iquitos itself, with the hazy jungle fringe beyond—all seemed faintly unreal, like out-of-place stage props, as Hernández took hold of the interview and surged along with it. Closing my eyes when I dared, I could well imagine myself back in some New York skyscraper office, listening to plans for the development of industrial empire.

"All this war work is just a start," he was saying. "We want something permanent.

"We want permanent towns in Loreto, public works, big centers of population. That is the great enemy of the selva—lack of population. We need immigration, and we would welcome the right kind."

"What is that?" I managed to interpose.

"People who are willing to make a life for themselves out here. Farmers, mechanics, small business men, workers. That's what we need . . . workers. But above all, people who are willing to stay here.

"Oil—that's one of our biggest undeveloped resources." Again he took over the interview.

"Oil! But not merely the extraction of crude oil to sell abroad. The foreign companies who can help us extract it are more than welcome. But we don't want merely to sell oil. We want to use it. We need gasoline distilleries, production plants. Here in the jungles. We need them to help us defeat the distances along the thousands of kilometers of our waterways, between our airstrips. We need to develop overland communications, we want . . ."

He was going too fast for me to get exact quotes. I made rapid notes in a curious shorthand of my own devising of what he and Loretanos of his ilk wanted.

My notes showed subsequently that Loretanos and Iquiteños wanted continuation of the production of rubber. I had to put down a side note to the effect that Army Armstrong of the Rubber Development Corporation had told us that he wanted to get out his last shipment about the end of the year and go home. "Kaput" to another of the rubber booms which in the course of the years had alternately sheathed Iquitos in the beautiful azulejos, or glittering tile of Andalusia, had made her owner of the first all-steel building in the world, had given her paved streets now well-buried in dust and underneath that the piping of an unfinished water supply system. Finally, it had given her an airstrip, which ironically enough became hers, and hers alone, as the boom times of World War II faded into the uncertainties of a peacetime future.

"These booms," Hernández paused long enough at one point to sum up. "They leave us with nothing but an exhausting series of half finished, or completely abandoned city engineering projects. We must have something better than booms."

Among the things that the solid citizenry of Iquitos and the department felt they must have, and I inferred they meant to get them, were orderly development of the production of barbasco, ficina powder, and milk of huigersona, from the oje tree. Hernández spoke vehemently of the need, also, of a downward scale on rates for air freight and passengers, new wharves for deep sea steamers, and more power-driven small craft to ply the endless waterways.

From there he branched out into a rapid fire discussion of the necessity for more widespread elementary and secondary education for the people, scientific farming to combat the sand and soapy clay of Amazon bottom lands, new streets and houses for the cities.

"Tanneries," he struck a note of special timbre. "We ought to have tanneries, right here in Iquitos."

Ah, yes—tanneries. Below our hotel windows was a commercial establishment which, in its pursuit of nearly every known transaction in goods, included a healthy traffic in hides. But this had nothing to do with exporting tanned skins. They were salted down and dried, in a relative manner of speaking, against decay. We could testify that at times decay seemed to have beaten the preserving processes to the starting line.

"We have all sorts of skins," said Hernández. "But they have to be shipped to Arequipa, or Lima, or down river for tanning. We ought to do it here."

I could agree. I had thought of taking home some skins direct from the jungle for handbags and belts, neckpieces and things for my wife and three daughters. Leaning out my hotel window I could have selected alligator hides or jaguar hides, the skins of fresh water otters or snakes, or the soft furs of the wood rodents, like the picuros or majas of the region, little animals that resemble long-legged squirrels. But the treatment these things were receiving did not suit me. Even when thoroughly dry they were stiff as boards, cumbersome, and smelly, not things to be handled conveniently in a flight bag. I, too, wished that Iquitos had a tannery.

"There is everything to work with. But we need better communications to market them," Hernández continued. He spoke of alligator meat, rich in vitamins and easily processed and

canned. Iquiteños long had been accustomed to salting it down and eating it like jerky. Then there was the meat of the paichi, Hernández said. Bert and Sam and I had eaten some of this fish the night before. It was as good as swordfish steak. This Amazonian specimen grows to as much as ten feet long and will scale as high as three hundred pounds. Among the many things that Father Avencio had shown me early in the afternoon was a diagram of the breathing apparatus of this curious Amazonian water monster. It is equipped with lungs as well as gills.

As suddenly as he had started talking, Hernández ceased, and began to stare out of the window. I was feeling slightly punch drunk.

Together we looked out at tatterdemalion old Iquitos. Hernández' quieter mood made it easier to recall some of her many ups and downs. There were the days of "black gold," or the boom times of World War I, when raw rubber was worth an English pound sterling per kilogram (2.20 lbs.). There had been various splurges before that, all leaving distinguishing marks on this gallant old lady of the jungle, none quite brutal enough to destroy her youthful buoyancy, none quite brilliant enough to make her grand.

Iquitos—any kind of woman for any kind of man! I could not help the personification. There was something about this end-of-the-world city with its population of 55,000 which projected a sense of many-sided femininity. Furthest seaport upriver from Belém, Brazil, a mere twenty-one day steamer cruise downstream, Iquitos could be an open-armed old bawd for the seafaring man. Just as easily, she could shake out her dingy spangles for men sweating and slashing their way through the jungle for a brief respite in her knowledgeable, if not too dainty, arms. And yet this same city, with its open sewers and doubtful water supply, could mother men and women with fresh and untarnished perspective, could act as loyal and unsullied companion to those like Hernández, Lara, and Orihuela, who sought to grow with her and live with her. To men of this sort, I understood that Iquitos gave solace, kept them alive to the daily job of warring against the jungle with its miasmatic swamps and lagoons, swirling torrents, smothering vegetation, monotony, ennui, enervation. It was

Iquitos that whispered the need of new weapons, especially economic ones, to press the age-old campaign against the wilderness. Iquitos, with the jungle forever clutching at her skirt fringes, was first advocate of the policy of ever being on guard against brooding lethargy and cafard. It was Iquitos, sprightly as a bobby soxer, that could counsel a constant search for modern gadgets to keep the jungle back, and to make of this unrelenting conflict as comfortable a war as possible.

Hernández' voice cut through my drift toward reverie.

"... the government," he was saying, "has given permission for six big oil companies to work in Loreto. That is good.

"But no one should consider it an invitation to exploit and move along," he snapped. "Any development must be for Loreto and Peru, as well as for outside. I think that is understood.

"López and Del Río have the type of operation we like here," he said. He surprised me. It was a topic I wanted to discuss, but had almost forgotten in dreaming the sort of things about the Amazon that men have dreamed for four hundred years or more.

"Their work could hardly be called commercial," I ventured.

"No, but they get to the bottom of economy," he countered. "They have already shown that parasitosis can be controlled. Del Río, for his part, has shown that proper measures can be applied to make jungle land produce good food. That's the kind of thing that counts in the long run. Our people like to be healthy and productive as well as anybody. This won't be such a bad place to live once our people are unshackled of disease and ignorance and poverty.

"What they are doing shows us the way." Again Hernández was astride the subject, reins held up short, spurs pressed in hard.

"We need greater purchasing power out here, and we mean to get it. Help us to get our people in better working condition, share a few technical advances with them, and this whole region will prosper. That means that your people will benefit. It's logical that we must buy our agricultural machinery, electrical appliances, tools to make something of our hardwoods, equipment to set up processing houses and tanneries, from you. Where else would we go? Especially for those things which your technicians teach us to use. Also, the vessels that take our oil, and all the other products

I have named to the United States, should bring us back the things you make, things that would make life more livable down here.

"Don't ever forget that our people like to live and know how to live as well as anybody. Just give them a little more purchasing power, and you'll see!

"Cooperation! That's the thing. It worked well out here in war-time. To your advantage possibly more than ours. We'd like to see it continue. In the jungle the job is never done. A little cooperation goes a very, very long way."

He terminated the interview. He had an appointment at one of the clubs. Something to do with the Peruvian Independence Day festivities, coming up over the week-end. I strolled through the park toward the hotel. It was dark. Night had fallen with that startling abruptness of the tropics. The young people of Iquitos had begun to take over the plaza. Here and there I saw officers and civilians in their white dinner dress and their ladies in evening gowns, stepping carefully over the dusty holes in the street, enroute to fiesta-time parties. A military band sounded out a patriotic song as it swung down a side street toward the brightly lighted bandstand. Iquitos, with or without adequate water supply, with or without rubber and oil booms, and certainly minus any semblance of municipal face-lifting, had decided to anticipate the official fiesta and to be gay. And she went about it with a disregard of her somewhat rundown appearance so complete that it was refreshing.

Certainly it was contagious. I found Bert and Sam freshly showered and shaved and pulling on clean light clothes. The fact that they had used up the last of the running water in our hotel until the next rainfall, and the fact that the battery of hygienic services down the corridor were beginning to give notice of a dry spell, were but fleeting annoyances. I had taken on some of Father Avencio's patience and Mayor Hernández' buoyancy. The two things added up to a feeling that all was well, that there would always be fresh perspective in a jungle setting which superficial appraisal might too easily catalogue as an unconquerable spawning ground for discouragement and defeatism. I found enough water in my washstand bucket for a shave and slapstick bath, and in a fine festive mood fared forth with the

others for dinner and an evening of billiards at the Iquitos Club.

Next day, early and cool enough for my leather jacket to feel comfortable, we tackled the old river itself. The *Presidente Roosevelt*, 48-foot medical launch of Dr. López' cruising service, was in from its thirty-day run down from Pucallpa on the Ucayali River, and we went aboard for a short run up to Tamshiyacu—only a day's run there and back, if we were lucky. For this I had been longing. In preceding days it had seemed to me that with all the talk directed to and of the Amazon, it would be my lot to fly back to Lima without sticking a toe in it. But the day finally came along. Now I would not only absorb facts and impressions of the Amazon, useful in my line of work, but I could gather some good yarn material for those winter meetings of the United States Power Squadrons. Something had to be done, I felt, to give me a matching voice as story teller among these unrivaled navigators of the inland and coastal waterways. Perhaps a careful log of the Tamshiyacu cruise would do it.

We nosed into the current heading due south. For my log I judged the distances between city docks and the big frontal island at Iquitos, two thousand miles upstream on the Amazon, to be about the width of the Potomac at the Washington tidal basin, where the Japanese cherry trees blossom in spring. With this linear calculation, all comparison between the two rivers ceased. Most of the passengers crowded the awning deck above main cabin and engine room. We hugged the starboard bank as we passed Belém, or the amphibious suburb of "caña brava" and thatched houses which served as port for dugouts and myriad other small craft employed by the nomadic rivermen of the area.

To anyone with a feeling for boats, the dugouts were fascinating. Hewed and scraped out by hand with odd bits of tools and the patience only an Indian can employ to its full, they rode lightly on the water without the slightest list to hint at faulty workmanship. Some had prows and sterns carved up and out from the waterline into tiny platforms, like miniatures of the fore flight decks of the big World War II flat tops. Others were cut off square at the stern, like the box-sterned fishing cruisers so plentiful in United States waters. Some were so small that it was hard to see how even the tiny Indian boys could handle them

without capsizing. Others ran as long as thirty feet. All were narrow-waisted, treacherous looking. Yet some carried full-length thatched sun and rain canopies, with smoke from mud cooking hearths amidships funneling out of tin or bamboo vent pipes. In these larger "conoas" whole families seemed to feel perfectly at home aboard a comfortable ship.

"I'll be a son-of-a-gun! Look at that!"

The ejaculation was drawn from me involuntarily.

"Yeah! I knew that would surprise you."

My huntin', shootin', fishin' friend from Arkansas and I tended to drift together to compare notes whenever there was waterfront, bayou, or woodland scene to contemplate.

"That's the way they all do it out here," he said, thereby confirming what I thought I had seen. Two Indian boys in pirogues looking like Dresden miniatures of navigable craft were paddling furiously toward the modest wake left by the *Presidente Roosevelt*. But that was not surprising. All boys like to "ride the waves." It was the paddling technique that startled me. It was against all the Sea Scout or summer camp rules. These kids were jammed cross-legged as far forward as they could get into their tiny craft, wielding short-hafted, pear-shaped paddles, port and starboard, about like a jockey lays on the whip in the drive down the home stretch. Bows well down and stern dancing about with their movements, they crashed into the waves and rode them out. One of the little boys took about half a bucket of spray in his lap, at which they both shouted gleefully and flashed us wide ivory grins.

"Don't you ever try it," cautioned Sam. "They're like cats. They'll step on the sides of those things, run up and down them and stand up to paddle, as if they were on board something as big and steady as this launch. I couldn't do it in a hundred years."

Throughout the day I observed, and so noted in the log, that in the upper Amazonian basin, the preferred method of handling tricky craft is from the bow—not astern, or amidships as is the accepted custom among the "voyageurs" of the Canadian North Woods.

With the friendly admonishments of my Power Squadron handbook in mind, I noted disapprovingly that Captain Davila's small wheelhouse carried no compass, no charts, no pelorus, no navigat-

ing instruments of any kind. There was a coiled leadline, and a 16-gauge single-barreled shotgun in the cabin. But not even an alarm clock, much less a chronometer, to tell the time, no RPM or logging recorder to tell his speed, and his controls consisted of a 16-inch galvanized pilot wheel and a bell pull to the engine room. The whole layout was far from impressive to anyone who had ever leafed through Bowditch or Chapman or any of the other navigation textbooks. I confided as much to Sam.

"Shucks!" he grunted disgustedly. "What's he need a compass for? He can't go anywhere but up or downstream. So long as he's headed downstream he has a couple of thousand miles or more to go before he can get lost off the Amazon. And if he goes into the wrong tributary upstream all he has to do is turn around and drift back until he knows where he is. Charts wouldn't help him much either, these sand banks shift so much. Whenever he spots shoal water he heaves his lead and feels his way around it. Time doesn't mean much, not out here. The old *Presidente Roosevelt* will do just about ten miles without current. If the river is flooding he goes awfully slow upstream, and can cruise like hell down river. You won't find him cruising much at night. Too many shifting sandbars, heavy logs, and stuff. And you don't notice any channel markers, or light buoys, do you?"

No buoys! I was beginning to get convinced. Give me my compass and chronometer for company's sake. That mental reservation I made. For the rest, I supposed Sam was right. On the upper Amazon there seemed little need for navigational gadgets. Just the leadline, plenty of spare parts for the engine, a spare shaft and propeller, a shotgun, fishing tackle, and mosquito repellent, and I was ready to concede that your Amazonian small craft operator would have all he needed. All except a good cook.

Here was an essential. A good cook. Odors from the galley vent indicated that a roast of pork was being beautifully browned over. It was only about eleven A.M., but we had been astir since sunrise and it was still cool enough on the big brown belt which meandered through canyons of green latticed with white, for the idea of roast pork to be interesting. We went below, while I scribbled another note in my book, an observation which held all through the various tropical zones that I visited. It was to the effect that

the trees of the tropics to a considerable extent have white or light gray boles and branches, unlike the deeper and darker barks of their cousins to the north. It added another quality to the brooding jungle, that of ghostliness, with the very skeleton of the wilderness showing through the heavy green in spots.

The roast was as good as we expected. Its inviting smell took over the main cabin, driving away antiseptic odors of that floating dispensary. After lunch Davies, Orihuela, and I went to the boat deck again where we sat half-reclining in hammocks hung from the awning stanchions. I was sleepy, but not too sleepy to make notes on cruising the Amazon.

The engine of the *Presidente Roosevelt* was revved up enough to keep our gallant little hospital ship churning along at six miles an hour. Sometimes Captain Davila would hold her close in to one or the other bank to take advantage of back current. But at other times we took the full current bow on.

From Orihuela I learned that the usual course of the *Presidente Roosevelt* took her past Tamshiyacu to where the Marañón and Ucayali rivers joined to form the Amazon at Nauta. Thence she would proceed to Yurimaguas on the one river or Pucallpa on the other, stopping at various small towns en route, and tying up overnight to the river bank. The Pucallpa route took her 1,200 kilometers (745.6 miles) upstream, whereas the Yurimaguas journey was only 800 kilometers (497 miles) from Iquitos. As we plodded along, I noticed that Captain Davila would nose in and then veer away from the minute villages along the river bank. At one—Panaguana—a cluster of half a dozen thatched huts boasting a rickety pier, I thought we were going to tie up.

"It is his normal procedure," Orihuela responded to my remark. "The people are getting accustomed to bringing their sick or ailing down to the bank when they sight the *Roosevelt*. Where there are no villages or clearings they come to the bank and wave a piece of cloth. The launch puts in and the doctor goes to work."

"Yes, and you might think they'd like this life, but they don't," said Sam. "They get mighty, mighty sick of it. I think I would too. Just look at it. We go mile after mile around bend after bend and there is no change. It all looks the same. I can see that it would get awfully old after a few days."

I thought so too. In fact I was grateful that my particular cruise was in cheerful company. I could hear the doctors and the ladies slapping cards on the mess table below and laughing gleefully at their various coups. Sam was always good company. Orihuela was dutifully filling me in on Amazonian lore. Otherwise, I thought, despite the comfortable hammock and my own penchant for pleasant day dreaming, a few more bends in the river which revealed nothing but limitless bush and timberscape, would reduce me to hysterical cafard.

Endlessly it unfolded, yet seemed to fold in upon itself, as we droned along. Villages, or so they were called, were three or four thatched and cane houses, occasionally perched on pilings to rise above seasonal flood waters. Or the houses were built on log rafts, as though their owners had become disheartened in an unending struggle which pushed them beyond the water's edge and into the stream itself. Clearings were mere strips of thinned-out timber supplanted by banana trees, a few stalks of corn, some papaya, mango, avocado, or breadfruit trees. Everywhere man's foothold on the banks seemed precarious. It appeared that he and his family had to be amphibious—web-footed like a Chesapeake Bay retriever, I thought ridiculously—to survive. Vegetable plots were as likely as not to be water-borne, like the floating flower gardens of Xochimilco back in Mexico. But again this represented a battle with Nature, not a picturesque husbanding of her bounty. The Amazonian gardens represented weeks of toil in scraping up nutritive topsoil to be guarded against the encroachment of weed and vine on rafts shored up with hardwood poles.

The Indians interested me always. These were Father Avencio's "civilized tribes," but scarcely tribesmen any longer, in that they were within paddling distance of Iquitos, and hence all mixed up among themselves and with the outside settlers of the region. We watched their dugouts when at long intervals they appeared. Heading toward Iquitos they would be laden to the gunwales with the not too plentiful and easily spoiled produce of the region. Occasionally the bow paddler, still something of an anomaly to me, well-traveled and friendly in the Amazon sense, would wave a paddle at us. Mostly, those on the banks and afloat were reserved and, I thought, watchful. They did not move as we waved, just

stared. Even the children stood like small graven images until I brought my camera to bear. Then they ran, to peep at us from behind the thick screen of bush further upstream.

"They don't seem to think much of us," I opined after finally getting a couple of small folk lined up and shot through my lens. Orihuela corrected me.

"They are just timid," he said. "They are very friendly, gay, very nice people when they get to know you and trust you."

"At any rate, they're clean," I grinned. The *Presidente Roosevelt* had nosed around a bend almost into a family bathing party. There were several women, stripped down handsomely. They merely sat down in water covering their thighs, or laughed and turned their backs. The boys and girls scampered into the water gleefully and splashed toward us to catch our bow wave as Davila swung his wheel.

I saw some Indian men dressed up in slouch felt hats and "store boughten" shirts, but without a sign of pants to cover their breech clouts. The women were bare-breasted or not, dressed apparently to suit their own convenience. One brawny Indian paddling along upstream with the strokes of a reciprocating steam engine wore nothing but a breech clout, and his face bore savage gray scars. And from the bank of one clearing a couple of boys raced their canoes at us, flashing crimson-colored paddles. But that was all the color for the day. Paddles and punts were mousy gray, the houses mud-colored, the forest itself alternating between mustard green and olive drab.

It was a silent, brooding jungle, forever asleep in the dim light that could filter through to outline the ghostly tropic boles only where the umbrella tops of towering hardwoods met unevenly. It was no comfort, either, to realize that jungle life was mostly saurian, reptilian, cat or rodent—slithering, slinking creatures, all of them. Even the birds evidently did not want to be seen or heard. The noisiest of them was the parakeet, and even in flock he would raise voice only in screaming, jet-propelled flight away from something unseen by us, which had frightened him. Most prominent of the feathered friends was the "gallinazo," called "zopolote" in Mexico and Central America, and a blue-necked buzzard, nauseating in any tongue. At the moment I thought his

voiceless accuracy in pointing the way to where something was dead or dying was a particularly loathsome quality.

Possibly the most cheerful jungle sound we heard all day, and we did not hear it until dusk, was the booming croak of a giant bullfrog. But that had its doubtful side, too. Orihuela counseled me to be sure to learn to distinguish between that and the hissing cough of the alligator!

"Wow! Look at that!" We wheeled to the port side of the deck. Bert Howard had come up for a breather and was pointing astern. Whatever it was broke water again. It was something like a porpoise roll, but too submerged to tell us more than the fact that it was something big.

"Probably a paichi, and a big one," opined Bert.

"Or a 'lobo' [otter]," said Orihuela. We could only wonder.

It started Orihuela off on Amazonian lore again. Of course there were the water snakes, electric eels, the otters, tapirs, paichi, amphibious or water animals, and many others. But two were dangerous. There was the Paña, mad little devil the size of your hand with teeth like a dog's. In Brazil they are called "piranha."

"They attack in packs like wolves," said the young engineer. "Once they scent blood they will strip a man or an animal to the bone in a few minutes." I decided not to stick my toes in Amazonian waters.

Then there were the "canero," more worm than fish, but distinguished in regular Amazonian style from ordinary water-borne parasites. This species, said Orihuela, and the medical men agreed, attacks through the genitals, feeds upon membranous lining, is dangerous to bathers, can and many times has caused painful death. I did not feel like swimming.

Not more than a half hour after Orihuela had briefed me on all the types of parasites, other than amoeba and caneros, which infest Amazonian waters, and under the disapproving and amused eyes of Dr. Howard and Sam Davies, I used my campaign cap to scoop some water from the curl of the *Presidente Roosevelt's* bow wave, and defiantly drank my fill. I had to have something a little out of the ordinary to tell my brother boatmen of the Potomac River and other U. S. Power Squadrons back home!

Three long blasts of the *Presidente Roosevelt's* horn brought us

up short. Apparently there was to be something new 'round the bend. We were not disappointed. There it was. Tamshiyacu, population 3,000. A lone sawmill, its pits showing blood red with the dust and shavings of cedar, huacapu, aquano (caoba or mahogany), and the many other hardwoods or semihardwoods of the region, was the only thing we could see to carry the banner of light industry. A whitewashed school building was gaily decked out for fiesta time. The rest was the familiar drab cane and thatch of jungle dwelling, a type of architecture carried over into the military garrison and farm compound on the outskirts.

"Gosh, what wonderful stuff!" I exclaimed as we bore in close to the sawmill log jam.

"Yes, yes, yes . . . you're right. But it's practically useless except right here. And even here most of the really hard stuff can't be milled properly. Too hard!"

Antonio del Río, who took great pride in the agricultural performance of a boy's school at Tamshiyacu, was at my elbow, and as usual I had to ask this indefatigable, fast-talking young man to repeat. I had found that what he said made too much sense to go unnoticed.

He pointed to some big sticks in the log jam which were lashed to others.

"They won't float," he said. "Have to be buoyed up with lighter stuff. Imagine trying to transport that any distance, even if we had trucks and roads, which we haven't.

"Local carpenters won't work with them," he said. "Wears out their tools. They're used for pilings, corduroy road strips, or firewood."

Del Río pointed out a huge log, beautiful yellow cream across the butt, which he identified as the priceless, and because of lack of transportation facilities, uneconomical, quillo bordon. Another blood-red log was steel-hard palo sangre, equally difficult to export. There were marblewood, cocobolo, dozens of others, lying helter-skelter on the bank at the water's edge. Seeing them there it was understandable why the more workable cedro macho, which is more like mahogany than our cedar, was used for such homely tasks as framing screened windows and porches, and fur-

nished much of the scaffolding for construction work in Iquitos. To the Amazonian, fine-grained cedar was not a choice wood reserved for my lady's hope chest. In the Amazon it did the work of pine. Del Río told me that with an abundance of woods like those we were passing defying export on a commercial scale from the upper Amazon, the river traffic had contented itself with merely skimming the crop of cedar and mahogany growing close to the main channel. I had to mark up a round for the Amazon.

At the school it seemed as if all of its 260 boys ranging from five to sixteen years wanted to shake us by the hand and personally show us their garden plots. The long-threatening rain began to come down in the relentless fashion depicted in the play by that name. But we had to brave it. I was prepared. The ladies stayed in the schoolhouse, and I could use the plastic slicker that had remained dry since I left Mexico. We saw dozens of raised garden beds rimmed with hardwood poles. I took pictures of gleeful boys who licked the rain off their lips, pushed back dank hair, and tried to spruce up sodden clothes, as I begged them not to look at the camera and not to pose.

Then we went on to meet Captain Miguel Quintana, commandant of the garrison, and Señora Quintana. I gave my slicker to our ladies who got wet anyhow trying to share it. Captain and Mrs. Quintana were immensely proud of the garrison farm which Del Río had helped to establish. Think of it! They could produce their yucca, bananas, fruits of the region, tomatoes, squash, cabbage, and other vegetables hitherto foreign to Tamshiyacu diet.

The results?

"Excellent," said the young officer. "We help feed the town, you know. The doctors and townspeople report decreasing morbidity, and we ourselves have noticed that the children seem to be livelier, healthier."

We could have lingered gratefully on the commanding officer's extra large and wooden-floored caña brava front porch, drinking a pisco concoction of his own which he gleefully called—"nun's milk, an impossible name for an incredible drink."

But our pilot had other ideas, and so signified with a blast from the *Presidente Roosevelt*. He had moved her from municipal to

garrison dock. It was six bells of the afternoon watch—three o'clock. The rain showed no signs of abating, and at best night falls quickly over the Amazon in July.

Did we wish to make a dark run to Iquitos? That was his query as we went aboard regretfully. Our regret changed to impatience to get underway. Most emphatically we did not relish cruising the Amazon in the dark. There was evidence of good humor asserting itself aboard as the *Presidente Roosevelt*, with the current helping instead of hindering, swept along at a smart ten land miles per hour. The sun was blanked by the nimbus cloud. Gray shreds of mist rose off the water. I again noted the absence of compass in the wheelhouse, but was reassured by Davila's intent figure, crouched over the wheel, with one hand near his bell pull.

Three hours later, or ten hours after we had nosed out from our moorings that morning, Señoras González and López and I were perched atop the wheelhouse, enjoying the rays of a twilight sun that had broken through and made everything clear on the Amazon. We sighted the tall spire of Father Avencio's church far down river. Then the Iquitos sky line, the Hotel Malecón Palace in the forefront, began to take form.

"From where I sit," I indicated the lonely river and the unrelieved jungle walls on either side of us, "it looks as good as Manhattan."

The rain-washed azulejos of the principal buildings sparkled in a sudden burst of the setting sun. Church bells sounded out the hour—six P.M. A bugled mess call joined in faintly from unseen city outskirts. We could make out figures moving mistily along behind the white balustrades of the Malecón. From out on the river Iquitos looked like a pretty fine city, despite its tumbled log-boom wharfrage, the thatched roofs of Puerto Belém, and the beaten-up river craft harbored there; and notwithstanding its foul buzzards coming to roost over the river banks to await the next morning's feast on offal. I confided as much to the ladies. They smiled and began to enumerate the old girl's faults and virtues, her shortcomings, and her promises for the future.

"At this hour, and with a day in this everlasting jungle behind me," I proclaimed, "I will take her as she is!"

It was not in the cards that I should leave Iquitos without some

souring experience to offset the genuine will for progress which I had noticed on many sides. That evening at the Iquitos club Sam and I were talking to a young man of the old world who made a point of knowing all the answers. Using our own slang, in a sort of deference, I supposed, he scoffed at Sam and Bert, their Peruvian co-workers, and the United States generally. The public health men were visionary suckers and dumb clucks for trying to do anything permanent in or for the jungle or Iquitos. For him there were no doubts, wonders, or questings. His course was clear. For him, fifteen, perhaps twenty years, of relative discomfort, at a sizeable profit, of course; then retirement in the homeland. He had excellent prospects in simple merchandizing. Take hides, for example . . .

We moved away. His parroted old-world cynicisms grew irksome. Almost eight years of living in the cultural and traditional surroundings of which some Europeans talk so much and of which so few can partake, had convinced me that when a European goes "colonial" about America or any part thereof, his notion that he can criticize with impunity usually springs from a well of desperate envy too deep for him to evaluate properly. The attitude of our young European was not only flippantly critical of Peru and Peruvians, it also showed that for him the only motive for staying in Peru was the profit motive. To him the idea of building so that when he retired something would be left behind, was nonsensical.

I thought of my father who, by way of contrast, had often said that though he might have little in the way of goods to leave in the American republic which gave him welcome while he raised a family and advanced himself in his profession, he would be willing—by God, he would—to leave his bones there. I enjoyed a flashback picture of the Old Man, who at that very moment and despite a rather advanced age for rugged field work, was practicing his engineering skill in permanent construction work in a republic where his sort of service was needed for peacetime economic advancement as well as for urgent war demands. With me he had already left the abiding sense that Cuba was my home, my father's home, and that this in no way conflicted with my United States citizenship or my need, during wartime, to serve my coun-

try. I knew of numbers of Latin Americans whose work in the United States had nurtured feelings for my country identical with those I enjoyed about Cuba. This was a far cry from the jealous skepticism of older continents.

"And that's the way it should be," I thought, almost aloud.

The attitude of the European made it clear to me that in Lara, Del Río, Orihuela, Hernández, the agronomists of Guayabamba, and other cooperative workers I had met, virility was candid and patriotic and unyoked by Old World traditions of failure.

These men were willing to give something to life in the jungle as well as take what they could from it. They looked ahead quietly, honestly, to the task of putting something into the wilderness that would stay. And in doing so they did not squirm, as my cynical European did, with the obvious effort at being over-wise.

For them there must always be something new 'round the bend.

CHIMBOTE—CINDERELLA CITY OF PERU

For Her No Fateful Stroke of Twelve!

"AT LEAST we won't have to worry about oxygen this trip!"

Whether or not this was effective humor, at least it drew a smile from my tight-lipped Bostonian public health cicerone. We were up and in motion again at six o'clock of a dank Lima morning only a couple of days after flying back from Iquitos. Dr. Howard had a habit of starting his travel, no matter how short the journey, at six o'clock. He called it efficient planning. Sam and Mrs. Howard and I were inclined to view it as a fixation.

It was I, of course, who had made him a few moments late getting started that morning, and I thought a jibe might do more than an apology to correct the situation. Bert was tender on the subject of oxygen. Flying back from Iquitos we had standing or floor-lying room only in the tail of Slim Faucett's big ship. In the very last seat, the steward's jump seat, was a Chinese with an advanced degree of tuberculosis. Since we all had to plug in our oxygen hoses on the last vent, Bert had cautioned us to avoid using the same tube as the sick man, and repeated instructions about a few long inhalations every five minutes. Sam wandered forward to talk to some oil men in a cargo hold jammed with raw rubber and parts of airplane engines.

Then, as we began to reach for the higher strata, Bert passed out on me. To him had fallen the chore of officially representing the Institute at the big official Independence Day celebration in

Iquitos the night before—an all night proposition, the way Iquitos celebrate. At first I thought Bert had slipped off to sleep, sitting on the floor with his head against the washroom bulkhead, but when I tried to rouse him to take some oxygen, there was nothing doing. Then the Chinese boy got so weak he couldn't manage his tube. The steward was forward attending to some women and children. I had quite a time trying to feed them both oxygen without getting their tubes mixed. I never did know which one I used. Finally the steward took over, and I went forward to stretch out on a pile of raw rubber smelling for all the world like dried codfish, and slept all the way into Limatambo airport.

It was Bert that time who failed to obey the doctor's orders. And he, too, had suffered for it. As I had hoped, the recollection of it as we started out for Chinbote, far northward on the coastal desert, this time in the Servicio car, stirred a humor in him which I had come to relish. Here was an important man who could laugh at himself.

"What's wrong with this city?" I asked, encouraged to whimsy by his chuckle over the oxygen incident. "It is simply not natural for a city to be so consistently beautiful. Where's the catch?"

We were driving through a humbler portion of the old vice-regal seat, picking our way through traffic on northerly streets. But even here the houses, some of them 'dobe and unimposing as to size, each behind its 'dobe garden wall, made of the street vista a pleasant whole. The day before Sam had taken me on a sightseeing tour of some of the swankier suburbs, and there, too, I had noticed that beauty ran in blocks, was not limited as in most cities to a few superhomes surrounded by tawdrier dwellings and smears of vacant lots. Havana, Mexico City, Washington, and Madrid were not like this.

"I've noticed it, too," said Sam. "And I've learned the answer. There is a municipal or federal ordinance here that requires the owner of any property to put a decent wall around it. That makes the general effect very pretty. Take the wall away so you could see through the backyards to the next street and your impressions would be mighty different."

So Lima, too, had its unprepossessing backyards and slum alleys!

I failed to find the thought depressing. Somehow it supplied a needed note of reality to the beautiful old capital. At least she was a step ahead of most big cities I had known, in that she presented an unfailingly beautiful face to the passing world.

Soon we were out of Lima and proceeding along the Pan-American Highway through sand dunes which threatened to slide us, roadway and all, several hundred feet down into the sea. Further along, we bore inland about a mile and shook off the unhappy sensation of trying to cut across a gigantic avalanche on the bias. We were driving mile after mile over the desert which had looked so unruly from the air.

The experience was weird. In Mexico and the southwestern United States, the deserts at least had some scattered vegetation, mesquite, the homely ixtle, and the beautiful candelabra cactus. There was none of that in the Peruvian desert, north of Lima. Just sand. Here the breezes from the sea played all sorts of tricks. They marshaled whole regiments of dunes shaped like horses' hooves. Other dune formations were like the tiny things children scoop up on the seashore, still others were enormous banks piled hundreds of feet up on mountain sides or in mountain clefts, looking for all the world like snowbanks.

For the most part it was just plain white sand, but not far north of Lima we ran into a long stretch of hilly desert that was simply unbelievable. The dunes, or mountains of sand, were terra cotta or alternate apple green in color. And the colors were not mixed in the same hill formations. These ran to cones, rhomboids, sugarloaves, ridges, hummocks, molehills, and what the Peruvians call "chichas" (nipped mounds like the breasts of a woman). The unbelievable thing was that each formation retained its individual color though they were all mixed together indiscriminately. At first I thought this must be the effect of some freak of coloring caused by invisible rays of the sun filtering down through the thick blanket of the Humboldt overcast. Then I figured it must be some kind of close-growing lichen, or moss, colored by curious chemical reactions in the sand underneath. I was correct on neither score. The stuff was red and green sand, and pausing to scuff in it and rub it between our fingers we found that the solid matter underneath was red and green rock.

Out of this chapter of Grimm's *Fairy Tales* we rode into more sand. At times we could see the gray belt of the highway rising and falling straight ahead to the horizon. I began to feel that I was dreaming, that the truth must be that I had wandered onto some vast movie set, or was back in the Sahara itself. I would not have been surprised either at being ordered off by some fat little man with beret, megaphone, and thick accent, or at having a real Arab shove a flintlock around a sand dune and pot me with a dumdum. But I *was* surprised and impressed when Sam squeezed my arm and pointed out the car window.

"They don't put up crosses for dead cows," he was saying.

What we saw just off the highway was a scattering of bones, finer than most we had seen in the sand that morning. To one side, near a drooping cross fashioned of driftwood lay a human skull. Scant was the wind's respect for this shallow grave, scooped out according to Indian custom where the occupant had happened to succumb.

About five hours of steady driving put us in Chimbote. Chimbote of the rickety frame store and restaurant fronts reminiscent of the frontier cities of the old "Wild West." Chimbote, with a landlocked harbor to make an ocean mariner's eyes bug out. Chimbote, whose economic possibilities in coal had inspired a detailed report by Ed Cleary in the *Engineering News Record*, and later had earned the respect of Clark Galloway, Latin-American editor of *World Report*, a man I knew to be as editorially hardbitten as he was personally soft-spoken.

Here was a "Cinderella City" in the making, a shabby child of destiny. To Bert and Sam I knew her to be a pulsing, steadily improving patient who had had a very bad time indeed.

The history of the town was vague, and having never been quite out of the shadows of Peruvian economic development, naturally she had legend about as lurid as the imaginations of casual visitors would permit.

One thing we knew of a certainty. Chimbote had been a pest-hole! Medical reports agreed on that. I had seen one in Dick Plunkett's office which stated that two weeks' residence in Chimbote made malaria in one or another degree of malignancy almost obligatory.

That was her case history. Her economic record was entirely compatible. Back in 1883 the services of Chimbote's magnificent harbor had been offered to the United States for a coaling station. That was in recognition of our country's good offices in helping to bring about the Treaty of Ancón which closed the war between Chile and Peru. Yet rarely had any vessel flying the United States flag dropped anchor there. By preference no vessel would berth there! With heavy-tonnage anchorage furnished by a broad and deep bay girded to seaward by a chain of precipitous bird islands, the port had been shunned by all but the guano barge-masters.

Readily ascertainable facts as to the town's history had a way of feathering off into the vagaries of local legend, but even these chimerical records took common direction when mention was made of the city's ills. "Paludismo" (malaria) was the culprit. Though the municipality was laid out in broad thoroughfares and ample city blocks, who was to live in a town where the population, formerly 4,500, was literally dying on its feet? What use could excellent anchorage and room to maneuver scores of deep-draught vessels be to shipmasters who dared not touch there for fear of being quarantined at the next port? How could they coal vessels at Chimbote when its 50-mile rust streak of railroad leading back into the coal hills could not be operated on schedule nor the harbor coal yard kept filled because of "paludismo?"

When we drove into the town, Cinderella was only just then stepping out of her rags into raiment befitting what bankers, businessmen, and engineers had assured us was her manifest destiny. My first impression was of squalor mitigated only by a beach and bay that even the poorest imagination could convert into a sportsman's paradise. The tendency of the town itself still was to huddle in a few nondescript 'dobe, frame, reed, and wattle structures to watch life go by on the Pan-American Highway.

The impression was not enduring.

True, Cinderella's rags were everywhere about us, and Cinderella herself was still dirty of face. But there was youth and spirit in her movements. The small railroad yard, running through the city behind its brightly blued walls to the old dock at the southern end of the municipality, was alive with activity. Its

warehouses and dump piles were glistening with new machinery, its battered but busy little yard engines celebrating the triumphant "day" for which they seemed to have been waiting many long years.

Just off the old pier steelworkers and masons were noisily at work on a new 80-bedroom tourist hotel named "Chimu" after the original tribesmen of the region. A block inland past the ratty old main street, or the highway itself, bulldozers and heavy grading machinery were at work releveled and filling in the original ample plaza.

We drove on through to the northern end of Chimbote, a matter of a few blocks, and here was Cinderella with her face lifted. Here new hygienic masonry took the place of squalid mud and wattle. Here was a modern school occupying a full city block, putting a corner smoke hole and saloon incongruously out of place. Facing the beach was a 43-bed hospital, unprepossessingly squat in three acres of sand, but equipped with spacious, high-ceilinged wards, consultation, operating, laboratory, and dispensary rooms, despite its deceptive exterior. Beyond that was a group of beachside dwellings trim in their fresh plaster. And up against the outcropping of rock that sealed the bay from an inland sweep of the Pacific was the tremendous coal dump and the more than half-mile long new pier of the Santa Corporation.

We started to get out of the car at the hospital, but were diverted. No sooner did Dr. Carlos Quiroz, its director, see us approach than he ran, waving, to join us, followed by several others. The resident staff included three doctors, the first dentist to practice regularly in Chimbote, and a score or more of nurses and administrative people. They were all over and in the car welcoming Sam and Bert. We made a mass landing at Dr. Quiroz' house, where slender, tanned Señora Quiroz without a flutter changed the household course for the day and headed up on a party tack. Soon about a dozen of us were laughing and chatting over corvina from the bay, palta salad, rice, eggs, coffee, and some excellent cakes I had no other way of identifying save as Señora Quiroz' own. We all grew sleepy and there was considerable talk of the winy effect of Chimbote air, only hazily perfumed with guano when stirred from windward. There was more than a hint or two that it was siesta time.

"Yes, but we can rest any time," said Bert. There was excitement in his eyes. "First I want to see everything. This is history!"

Something in the restrained New Englander's attitude banished all thought of sleep. Instantly Davies and I, too, were ready for action.

Dr. Quiroz and the medical staff had things to keep them close to the hospital and health center. But one of the luncheon guests was Adolfo Crosby, sanitary engineer of the Peruvian Anti-Malarial Service. He was in Chimbote to meet Phil Riley and Bob Ollry of the Institute Health Education Services and help in a general follow-up disease control drive. Crosby's English name belied his Spanish-Peruvian origin and he spoke nothing but his native tongue. But he became a willing and able guide, nevertheless.

"It's your show, Sam," said Bert. "Let's see the engineering works first."

The two sanitary engineers took over, and mounting Crosby's half truck the better to negotiate rough passages, we drove to the outskirts of the city. The tale of Chimbote's emergence from a mire of malarial lethargy began to take form.

For generations, it seemed, Chimbote had been left severely alone, taking what satisfaction she could out of her fine natural harbor and her untapped reserves of coal, while she languished between bouts of chills and fever. Peru had been accustomed to shipping the bulk of her minerals to Europe from other Peruvian ports offering safer medical harborage. But World War II found the United States clamoring for all Peruvian strategic materials to assist in the United Nations war effort. Peru herself broke with the Axis powers on January 24, 1942. Chimbote was swept into the current of the hemisphere war effort.

"There was considerable doubt at first," said Sam, "as to whether this fever hole could stand the pace of modern development. Colonel Gotaas * and the first engineers to survey the place had to translate this doubt into immediate action to clean up, even though everybody had gotten used to the idea that the anopheles mosquito was here to stay.

* Harold B. Gotaas, Col. A.V.S., Professor of Sanitary Engineering, University of California, served the Institute of Inter-American Affairs as Chief Engineer during the war, and as president 1945-1946.

"It sounds funny but what they did was to drain the desert. I'll show you."

Following Sam while Crosby and Doc Howard chatted in a pump house below, I scrambled up a series of ladders to a crow's-nest platform girdling a high water tank. Westward and southward below were plantations of young bananas, avocado, fig, and other fruit trees. Still other acres were planted to eucalyptus, mimosa, and other seedlings. Beyond in either direction was a narrow belt of desert, and then the bright new buildings of the northern end of town. Sedately through the shady plantations and then defiantly under the open sun of the desert swept a wide, paved drainage canal.

"All this underneath us was lagoon water," said Sam. "There were about four hundred acres of stagnant water and scum in what was called the 'Big Lagoons of the North.' There were seven smaller lagoons east and south of the city.

"Everybody knew that the mosquitos came from the lagoons, but nobody seemed to know where the water came from. It wasn't rain water because it never rains here. And the Santa river comes out well on the other side of the ridge." He pointed to the sugarloaf mountain that ran athwart the course of the Pan-American Highway at the northern end of the city, forcing it to deflect inward around and over this huge protecting arm of the Andes which seemed to gather Chimbote and its bay into close embrace.

Sam explained that his predecessors had finally been able to determine that the lagoons were outcroppings of subsoil water just affluent enough to cover the acreage mentioned with stagnant water, but not well-enough nourished to form the running stream that would transform the pass into a productive gap in the desert. The engineers laid a main drainage canal from the big northern lagoons through the sand to the bay. To the south a series of smaller canals, each with its feeders, drained off the lesser lagoons, passing under the Pan-American Highway to the bay. The whole network, as he explained it, embraced about six and a half miles of paved canals.

"It became what you might call a war of attrition against the anopheles," said Sam. "He had no place to breed. It killed off

malaria hereabouts faster than malaria had been killing off people in the old days, and that was fast." Sam recalled that sanitary surveys conducted before the engineering program started in October, 1942, indicated that malaria affected nearly every family in the town. Incomplete figures for the year while I was down there indicated that this morbidity rate in the survey areas would be down at the end of the year to less than 3 per cent.

"And what is left we will clean up with our campaign of 'dedetetacion,'" said Crosby, pulling a word not in the dictionary on me. We were down from the tank by now. In Spanish d is pronounced 'deh,' and t 'teh.' . . . acion would translate as the ending 'ation.' The word Crosby had coined in manner so natural to those who conduct their lives in the beautiful simplicities of the Spanish language, could be awkwardly translated into English as "dee-dee-tee-tation."

"Are you DDT-ing everything, houses, stables, corrals?" I asked.

"We've done three hundred and twelve so far," he answered, "and before the end of the year we expect to protect every building in the town and its outskirts. Eventually you won't find a mosquito or fly or other disease insect within miles of here."

"Are there other diseases?" I wanted to know. There were. Typhoid was one that had been endemic in the outlying regions. Sam pointed to the pumping station and chlorination plant below the water tower.

"We put in a water supply system which is big enough for present needs," he said. "As the city increases in population it can easily be enlarged to keep pace. And we put in a brand new sewage collecting system of concrete pipe. It discharges underwater 450 feet out into the salt water bay. That ought to take care of the typhoid, as far as its water origin is concerned. It has already dropped considerably since they cut out the old donkey-back distribution of drinking water."

We jolted back over the sand track to the highway and town. There seemed to be a celebration on at the hole-in-the-wall motion picture theater, something special in the way of western thriller, I surmised. The place was being stormed by small boys and other children.

"I wonder," mused Bert, "if that is Phil Riley's health education program. By golly, I'll bet it is! It must be!"

We were not left long in doubt. Young Señor Crosby stopped his truck and came around back where we were riding G.I. style.

"I have to go in here," he said, glancing at his watch. "I told Mr. Riley I would help."

In some wonder I followed Bert and the two engineers into the dirt-floored theater. It was full of adult humanity, every cranny and crevice filled in by the smaller fry of the community, much as heavier rock is filled in with sand and gravel in the packing of roadbeds and jetties and the like. Even the regular cubicle for the motion picture machine itself was filled. A 16-millimeter job was perched on a table about halfway down the aisle. The air was stale and thoroughly humanized. And from the dirt underfoot came a damp mustiness unmistakably seasoned with the faint odor of guano.

"What goes on here?" I asked Bert, still wondering. The kids were hooting and clapping in unison like baseball fans when a home team rally seems imminent. They were like kids anywhere yelping for the show to begin. Crosby mounted the platform and amid cheers explained that they were about to see pictures which would help them to lead better, cleaner, healthier lives.

I was sure this would put a damper on the proceedings, but it did not. On the contrary the cheering increased. A squawk from the sound box followed by strains of introductory music had a quieting effect for a moment and then a surge of shouting trailed off into an occasional shout of glee and sporadic bursts of applause. I began to understand. Here on the screen were young Pancho, Juan, José, and their feminine companions going through the rudiments of family and community health protection, and good practice in balanced diet. The fetching thing to our audience seemed to be that any one of the characters could be any one of those who jammed the theater—in lovable, sometimes pathetic caricature. The audience ate it up. It was Disney again, carrying a serious message in a laughing, undogmatic, unpretentious way.

"About as good a way of teaching public health as anything I know," said Bert.

We needed no urging to get to bed early that night and as a

consequence did not let breakfast get cold on Señora Quiroz' table the next morning. I was the one this time who wanted to build fires under people. As an experiment in the application of coordinated public health measures to a disease-ridden community it was obvious that Chimbote represented success. The good will engendered for my country and my countrymen for a share in sweating out such a program was equally evident. By now I was less fearsome of the responsibility involved in the cooperative program method of inspiring people with confidence in Uncle Sam and what he stands for. Three weeks in Peru in the company of the cooperative people had made me feel that the worth of their work must be apparent to any thoughtful reporter, government executive, or legislator. I could not picture our government abruptly turning its back on this work. Anything less than establishment of the pattern of the cooperative programs as a permanent working part of our relations with the other American republics was becoming unthinkable.

Nevertheless, Chimbote was a symbol town in the cooperative scheme, an index of what could be done for a hemisphere community when the objectives to be reached could be considered of mutual advantage. I had to find out what made Chimbote's economic clock tick.

I sought out Carlos Vidal, chairman of the board of the Corporación Peruana del Santa, the government corporation which had been formed to develop coal and hydroelectric resources of Santa River Valley. Here was a man whose long years of experience with a big United States manufacturing concern could be relied upon to bring dollar values into the picture. I was willing to rely on my own reactions as to the human values involved and I had already found them good.

I was after hard facts. What possible benefit to the United States taxpayer, aside from a vague feeling of doing good, could accrue from assisting in the clean-up of this coastal pest hole?

It was a harsh question. The answer came steadily.

"The development of this area," he said, "will place Peru in a more commanding position in general hemisphere economy. It will give Peru greater purchasing power. And to us it seems logical that this purchasing power will be directed at United States

markets for manufactured articles, at least as long as your country continues to lead in mass production of better equipment, and as long as she shows an interest in competing in our markets.

"This is answering your question without consideration of the good will factors stimulated by your initial cooperation. Is it a fair answer?"

I thought our own business people might be the best judges of that, and said so.

"Good," he countered. "Now let me go into a little detail.

"The development of Chimbote is not just another money-making scheme," he asserted. "We foresee the orderly establishment of a real city, with its definite place in national advancement."

Then he spoke of the coal. The Ancos-Calgada deposits estimated at 125,000,000 to 200,000,000 tons of good anthracite lay in seams one and a half to seven feet thick only sixty miles by rail from Chimbote harbor.

"The railroad is being rehabilitated," said Vidal. We could see the end of the line extending out onto the half-mile pier from where we sat on the porch of one of the pleasant company houses.

"Soon production of about 300 tons daily will be stepped up to about 1,000 tons. The ultimate goal is 3,000 tons. The Banco Minero is helping small mine owners to improve their properties and increase production. But that is not all."

A subtle change came over this alert young executive. It was something I had often noticed as the distinguishing mark of America north and south, when the conversation turned to the business future. Here was no feeling of futility nor a rushing of the season of decay, a decay which in a Biblical sense must come to all earthly matter and enterprise. On the contrary there was a lift in the conversation, a predominant theme of opening up new horizons, turning up untouched resources, and the starting of a wave of accomplishment whose crest would not be reached in our generation or possibly the next. This was the real voice of America, still sounding for those who could hear, the chant ". . . there is everything yet to be done, little as yet to regret." Amused, I made a cross note to the effect that if you "scratch a

young businessman anywhere on these two continents, up comes a potential millionaire."

Vidal was now warmed up to voluble salesmanship of everything concerning Chimbote and Peru. It was exhilarating.

"See that pier," he exclaimed. "We have plans to get hold of some Liberty or Victory vessels. They register at 10,000 tons. They will haul coal from here to United States ports on the Gulf of Mexico or the Atlantic. They can return with phosphates, foodstuffs, machinery, and other materials needed as our national economy expands.

"The cleaning and storage plant is capable of storing 120,000 tons of anthracite and with a link belt conveyor system we can load out at the rate of 500 tons an hour."

These coal exports would not only make Chimbote but were expected to create a steady market in Latin America. That, he explained, would make coal one of Peru's most important sources of revenue, without competing seriously with United States coal exports.

"And if you think your cooperation has not already begun to pay off, look out there!" he exclaimed. "All that heavy machinery comes from the United States. Why, the American taxpayer won't lose! He can't lose! As the corporation develops its programs in this area we will be buying dozens of millions of dollars worth of your machinery and equipment. That does not include the steady stream of southbound commerce in phosphates and other stuff which our coal vessels will be bringing back."

A later check-up revealed that his was not idle talk about the purchases of his corporation. Capitalized at 200,000,000 soles it had already spent 50,000,000 soles or about eight and a third million dollars for United States mining equipment, dock cranes, trucks, and railroad gear. I made a random list of the stuff I saw on the pier head and it looked like an advertising index to United States heavy industry. This, indeed, represented a heavy immediate return to the United States for participation in a health and sanitation program which I knew had cost the cooperative services less than one half of one per cent of this figure. Vidal made no bones of the fact that the Santa Corporation could not have

attempted to start operations in the area without the prior malaria clean-up program.

"But coal is not the only future for Chimbote," he was saying. "We see no reason why electric power cannot revitalize the coastal desert strip of Peru."

Here he struck another spark of understanding. I had information from John Neale that much of the Peruvian coastal desert was arable. Much of what I thought and wrote of as desert sand, for example, was not sand in the orthodox sense, but soil powdered to a fine dust by the constant winds and lack of rain. Neale reasoned that irrigation would make it productive, as witness the plantations already started along the banks of the lagoon drainage canals in Chimbote itself.

Vidal was telling me about this further dream which promised to come true. Far up in the Andean crags, eighty-six miles from the mouth of the Santa River, his corporation was building a model engineering town known as Hidro—short for hidro-electrica. He said the town was near the site of a hydroelectric plant project modeled on the Tennessee Valley Authority pattern.

There a 125,000 kilowatt-hour plant was being installed to serve the Chimbote area and northern Peru. A six-mile tunnel to deviate the waters of the tumbling Santa was being completed, and reinforced steel and concrete caisson work was progressing ninety feet down to the bottom of the normal water course. From this point, called Cañon del Pato (Duck Canyon), one could look at Andean peaks towering one thousand to thirty-three hundred feet above. Vidal said that in places the canyon was only ten feet wide, and that when the dam was finished Santa engineers calculated they would have a power fall of 1,476 feet. The population of Hidro he placed at 1,500.

"The job on the hydroelectric plant should be completed within the next two years," he estimated, "depending on how rapidly we can obtain machinery from the United States."

"How are you going to use the electricity?"

To this question there were several answers. For the Santa Corporation was going at the job of developing the area in various ways. The model pier with its traveling and fixed cranes to handle any type of heavy tonnage was one development. Then there

was modernization of the railroad to Hidro. In Chimbote itself the corporation had built the modern school and the porch on which we sat was only one of many already blueprinted in a big housing program.

"These things will use some electricity, but not all," he explained. "As soon as Hidro gets going full blast we expect to use between seventeen to thirty-four thousand kilowatts of power on an electrolytic zinc installation to extract sulphuric acid, make ammonium sulphate, lead and lead derivatives.

"For the rest of Hidro's 125,000 kilowatts," he said, and again I heard the eager voice of young America, "I see no reason why we should not have electric trains shuttling up and down the coast, why it should not give us power for deep-well pumps to irrigate huge portions of these currently nonproductive regions. With cheap electric power I see no reason why this whole region cannot become a fine garden."

Then Vidal told how he had inaugurated a vocational school in Chimbote, and how he felt that better standards of living must be a consistent corporation goal.

"You see," he said, "the Santa Corporation faces possibly the biggest economic task ever undertaken by the Peruvian government. It started in terms of basic economy, a type of spadework designed to bring about better health and living conditions. To follow this line we want our working people to earn more, live better. We want a fine city. I dedicated the vocational school to that purpose. And I was not talking in terms of minimum wages. We want our people to learn to earn more than the minimum."

Graham Sullivan later gave me concrete evidence of the genuineness of this spirit. No sooner had Vidal inaugurated the school than he called in the cooperative service of the Inter-American Educational Foundation to set up a teacher's training program for Chimbote mechanics and other craftsmen. Sullivan sent three technicians to Chimbote to select ten of the best men to enter the training courses. Following these courses they were to set up schools where development of special skills could be spread as far and wide as possible in the Chimbote community.

That afternoon I loitered about the hospital and health center while Bert and Dr. Quiroz went over administrative matters. That

night I watched a young surgeon of the hospital save the life of a man dying with a ruptured appendix, as Bert and Quiroz, masked to the eyes, tied up spurting arteries, and after an hour of grueling suspense to us onlookers, helped with the sutures.

The next day, as we drove back through the fantastic desert, I sought to correlate my reportage on Chimbote and came to the conclusion that economically the story of the town must be one of a rags to riches nature.

Population had already increased from a faltering forty-five hundred to ten thousand and Vidal had been confident that "before very long Chimbote might easily reach a population of about a hundred thousand."

Certainly, I thought, here was a city in the making, as Bert had divined when he so tersely put an end to talk of siesta following Señora Quiroz' welcoming hospitality. Soon Chimbote would be "on the make" if anyone cared to put it that way. Her economic future seemed reasonably assured.

But I was not content with these impressions as representing the real story of our Cinderella City. Her inside story must be sensed, I reflected, in the avidity with which old and young alike flocked to the movies to learn how to be healthy and productive. It must be revealed in the eagerness with which Crosby and the Santa engineers had pointed out the saplings of eucalyptus, cedar, palm, and other trees planted as eventual groves to beautify the city.

I thought that it—the revived spirit of Chimbote, with its promises of broad, clean streets, healthy children at play, nourishing food on the table, and decent homes to live in—might best be glimpsed in the eyes of the young mother who, youngster wrapped in shawl, patiently waited her turn at the Health Center.

She seemed to be persuaded that for the new Chimbote there need be no fateful stroke of twelve.

Her next baby need NOT have malaria!

CHAPTER

8

OF SONG AND SOROCHE

"ASHES to ashes and dust to dust; if the Humboldt don't getcha, soroche must!"

This ridiculous paraphrasing of the old drinking song about whiskey and women kept repeating itself to the grinding rhythm, if rhythm it can be called, of an ancient rebuilt Chevrolet delivery van or half-truck which was to be our alternately pampered stagecoach and accursed torture rack for the next six days.

We were en route to Puno, on the shores of Lake Titicaca, over the Andes, by short, easy stages, with overnight stops at the chain of new Peruvian tourist hotels. That is what we thought. That is what we expected as we sallied gaily out of ancient Lima with its lovely bougainvillea and honeysuckle twining up toward varnished balconies, their carved balustrades and twisted columns hanging over the streets like the ornate poop decks of Spanish galleons riding high over the sea. And we were very gay. Who was there to tell us that the absurd refrain running through my mind was more omen than ditty?

"We" were Elena Flores Chinarro, reporter-editor of *El Nuevo Educador* (*The New Educator*), Roberto Koch of the Ministry of Education, myself, and the two nephews of Father Guillermo Salas, director of Granja Salcedo, a Catholic boys' school and farm far up on the shores of the world's highest navigable lake.

There was no hint of discomfort ahead as we jogged out of Lima that beautiful late afternoon. Despite almost daylong hitches

in our departure time, we were finally off to a good start. I had developed a philosophy about late starts. All along my airplane route down to Peru I had been subjected to the "hurry up and wait" psychology of the airlines. The fact that I had gotten up at three A.M. that morning and eaten a breakfast obligingly provided by the night staff of the Hotel Bolívar, before finding a door sill note which explained that the car was not ready, affected me not at all. Nor had a day of putting off departure for one thing or another as the hours dragged by dampened my humor. I was hopeful that the last delay—a long wait for some papers I had not had the foresight to attend to the preceding day—could be accepted as serenely by my companions. I was very jovial as I kept telling them of airport psychology in respect to delay—"it is better to wait until you know that everything is working smoothly than to hurry upstairs where you can do little about it."

Yes, I was very jovial, very much the reassuring promoter of an auspicious expedition—until I noticed the set of Bob Koch's aquiline jaw and thought I saw a hint of murder in his brown-flecked eyes. Then I put the Humboldt-Soroche refrain out of mind and subsided into unconscious humming of "My Old Kentucky Home."

"That's very nice," suddenly exclaimed Elena. "Sing the words!"

I remembered them as best I could while trying to hold steady on the higher notes. Soon we had exhausted my repertoire from "Carry Me Back to Ol' Virginny" to rousing, thumping "Old Mike Dugan's." Toward the latter stages Bob was doing a "tween-curtains" act with fragments of opera. At the end of Mike Dugan I told the highly flattering Elena that I had gone through my string, and tuned in with Bob on *Carmen*.

We were off! Bob had an excellent baritone and did stirring things with the aria concerning Carmen and the matador. Elena and I climbed lustily aboard the easier transitions. Even the "crew" up forward swung around and joined in, and the pilot shook off his sadness over our late start enough to test the new rings and bearings of his ancient engine with a forty-mile speed. We rollicked into Chinchá, only a short distance from Lima,

where, without objection, I heard our pilot's decision to spend the night.

Next morning, under the forgiving eyes of our pilot, Elena and Bob and I paid a surprise visit to the Colegio Nacional Pardo de Chinchá. In the sense of finding anything or anyone out of step we surprised no one. Director Fausto Santolalla merely turned some pressing matters over to his secretary and with assistant director Antonio Cook began to show us over the two-story establishment housing 750 students. Both men were engineers. Their appointments to the wine and cotton center which swelled Chinchá's population to 15,000 was in keeping with a new emphasis in Peru on vocational education.

To North American eyes there was nothing particularly new about the school. A big stone structure in the main, it had the usual Spanish-style play court under shade trees, and classrooms letting out on court cloisters. Some of the halls were equipped with carpenter benches and other manual arts facilities. A new structure was going up at the far end of the court, a building the directors enthusiastically demonstrated as the new machine shop for the twenty industrial students of the school. This figure would be swelled to eighty during the coming year.

"Yes, it is more or less like any grade school having manual training in the States," agreed Señor Cook. "That is what is so new in Peruvian elementary and secondary education."

"You see," he said, "it will be the first time in history that this relatively rich cotton and wine producing area will be able to train its own mechanics and farmers. We are developing agricultural training courses, too. Hitherto, anyone desiring special skills to apply to life in this area had to go elsewhere to obtain them."

That, I was told, was definitely new, not only in Chinchá, but in the school system throughout Peru. As I had noted over in the jungle, being on the periphery of activities of the cooperative programs tended to bring their values into clearer focus. Back in Lima I had visited the Politécnica, Principal de Peru, had gone down the line with my various guides to see alert young men and boys, some of the men not so young, running buzzsaws, drill presses, lathes, and forges. All this was fine, very modern, and probably conducive to establishment of a society of people like

my own, in which every man could if he would, take care of his own household plumbing and drive his own car, and every woman could cook and do her own washing.

It had all seemed a little odd, a little out of place in the shadow of old San Marcos University, one of the most ancient and respected seats of learning in the hemisphere. Besides, had I not frequently heard old Professor Dietrichs, late dean of the College of Engineering, Cornell University, tell his engineering classes that they tended to go out into life ignorant of everything except how to use a slide rule?

"How," I had wanted to know in Lima, "do you reconcile this emphasis on industrial training with the sensitivities of people who have had the European accent on the classics and the academic so deeply instilled?" And I had not been entirely satisfied with the answer that Peru wanted to spread education of the practical sort among the people who had been by-passed in the traditional practice of offering classical learning only to the elite, or chosen few.

Out in Chincha it was different. We had come only a relatively short distance from Lima, but had traversed enough desert, barren in the daytime and grotesquely quiet at night, to feel well removed from the busy thoroughfares of mankind. Chincha itself was in one of those many little valleys fingering down from the Andes to the sea which proved that scarcely more than a suggestion of water was enough to turn the dust of the coastal desert into garden land.

"You can understand," Elena was saying, and I found that I could, "that many of the students here will get no education after they leave this school. Before, they used to get the usual academic courses of grade schools here. Now they get, and you have seen how quickly they absorb it, something else—something that will help them enrich their town as well as assure them of better livings. What good is it to teach them some of the academic niceties of education unless you give them the training to fit themselves into a progressive community where they can have more schools, libraries, eventually even universities? Once there was a tradition for fine workmanship in ceramics in this vicinity. It is the sort of thing we wish to revive."

"You score a point, Elena," I replied. "What kind of mechanics

do these fellows make?" I asked Cook. Cook had studied industrial schooling in the United States, six months in Michigan and one in Florida, and had a basis for comparison.

"They are good," he answered. "They compare well with boys anywhere, some exceptionally quick and some . . . well, they had better take up writing for a living."

There was a laugh. Of Cook I made a wry notation—"no pantywaist professor here"—and looked more closely at the lank-haired, brown-skinned boys in blue jumpers who were working at some glistening machines. In all truth there was an extra gleam in their eyes. These weren't just kids going through a compulsory course in manual training. This was something special in their lives. I was reminded of my own young Pep the day we had added a chunk of the family budget to his winter-long savings from a newspaper route and sneaked his cherished dream into the backyard while he slept. It was a snappy, well-gadged and "man-size" bike, no plaything to Pep when we finally angled him into the back yard and convinced him it was his.

"It's just too much to expect," he kept saying. The mestizo boys working at their power machinery at the Colegio Pardo were like that. They still seemed to think that their actual, physical operation of the machines, was a little too much to expect.

"I'd like to talk to you," I murmured to Cook, as Elena and the others drew a little ahead. He took me by the arm and drew me down a side path leading through the gardens to the main gate.

"It's this," I blurted. His every gesture was one of quick intelligence, and his eyes were humorous, kindly. "All my life I have heard the argument on education, as between the usual methods in Latin America and those in the United States. We are supposed to be good on technical training, faulty in your eyes on broader, cultural aspects. You are supposed to be better scholars, but less gifted in the practical sciences. The question is—how can our people come down here and stimulate all this so-called U. S. know-how without arousing bitterness, without being accused of educational imposition?"

He looked at me steadily for a moment, then replied quite gravely:

"If there were any effort at imposition, the implanting of your

type of civilization upon ours, I think I would be among the first to resent it," he said.

"But, you see, there is no question of imposition. Suppose your people had a *kultur* [he used the old Hohenzollern word] that you wished to diffuse. We would reject it. We would reject you.

"You cannot judge these educational programs properly without first realizing that they are really inter-American, jointly financed and jointly worked out to meet specific needs," he continued. "For example—in Peru we have tried various 'systems' of education. We have had English, then French, then English again, and in spots so-called North American. Never anything we could call distinctly Peruvian.

"That is what we are trying to establish now in the elementary and secondary grades—something distinctly Peruvian. Of course that will have its adaptations. Adaptation has been true of education since the beginning of time. What we need in Peru now is many more people of special skills who cannot go to school beyond the secondary or even elementary grades. Your country has a fund of experience in this line, and through the Educational Foundation created by Mr. Rockefeller and Mr. Kenneth Holland, has been willing to help us devise systems that will work in Peru.

"Rest your mind," he grinned suddenly, "that's real cooperation, not imposition."

It did rest my mind considerably. I had seen political doctrine choke out all semblance of free education in the so-called youth movements and exchange of workers between Nazi Germany and Fascist Italy, and though I knew before I left Washington that no studious survey could establish a similarity between that sort of thing and the work of the Educational Foundation, there was always the chance of local discoloration. Educational systems, so clear to the school teachers, are particularly susceptible to popular distortion in what these same teachers must sometimes regard as a passionately stupid world. I was glad I could report that in Peru the bright colors of allied effort to establish better educational understanding and working conditions had not blurred or run together.

It was still midmorning as our saturnine young pilot, his air of long suffering hardly denting our good humor, pointed the nose of his car toward Ica, down the coast. More desert, more occasional strips of verdure thirstily following some stingy little water-course down to the sea. High to our left shimmered the endless Andean range, its upturned edges gleaming freshly sharpened in the morning sun. Far to our right was the Pacific and the inevitable Humboldt haze.

We were bowling along toward Ica, a choice resort town in the heart of cotton, grape, citrus, and vegetable country. Even while Elena told me of it, we drove down a broad street in a clean, busy little city, and came to a halt in the cool of shade trees which had been nursed to tremendous growth in the big central plaza. A smart little hotel serving excellent food added to our sense of comfort, and with no qualms at all we overrode our driver's desire to push on, in favor of looking over some of the agricultural developments of the area.

"You want to see what we are doing? Come."

César Villagarcia, one of John Neale's extension agents, was more than pleased to show us, rather than try to explain. We got into his Ford half-truck, and at a pace that made our progress hitherto look very sedate, whisked about the countryside, a curious combination of desert waste and lush cotton land.

"It's all a matter of water," said Villagarcia. We were doing sixty over an ancient, tree-lined, cobbled highway with two sets of concrete ribbons running down it like double tracks of a railway. Villagarcia seemed to pay a minimum of attention to his driving, but I noticed that his wheels stuck to the smooth ribbons as if we were in fact running on rails.

"Where there is water we can grow things. Otherwise, look at that." I looked. Out of the vegetation ahead a great triangular bank of sand crept up the mountain side, its hypotenuse as sharp as a carefully creased piece of paper.

"Dust and sand," said Villagarcia. "No water, no vegetation to hold it down."

Then we veered off the main highway onto a private road leading to a big plantation, the Hacienda San José. We drove through fields and vineyards, and in the vineyards something a little out

of the ordinary caught my eye. The furrows between the lines of grape vines climbing up their stakes were not cleaned out, yet they did not look neglected.

"Haven't you seen that before?" asked my guide. "Those are vegetables and other things. Wherever possible we make the land do double duty around here."

We drove down to the sulphur baths at Huacachina, the locale which gave the name to the girls of the region, girls celebrated in a song which was the rage of the moment. There we sat in a pleasant, cedar-paneled cafe over drinks, and watched bathers toboggan down steep sand slopes directly into the cool lagoon.

Ica and its vicinity definitely was a place to linger. Having photographed the cotton fields, the Indian pickers squatting under their broad straw hats in the hacienda court, the irrigation canals, and the ancient cobbled thoroughfare which was that region's contribution to the Pan-American Highway, I was content to sit in the cafe and take notes.

Villagarcia's problems were mostly those to be found in any region where a sure money crop could be grown. And in Ica cotton was king. As extension agent for the cooperative food service, he stimulated fruit culture, vegetable growing. In the first six months of the year he had already distributed more than 3,000,000 pounds of corn and potato seeds to small farmers of the region, had supplied them with tools at cost, and in each small valley of his territory had set up one farm as a demonstration center for irrigation, seeding, fertilizing, and other advances in practical farming.

"We reach every farmer hereabouts," he said. "We have formed twelve agricultural committees and our agents visit them once a month. Working with them we try to show that all their effort is not only justified, but required, to build up the food supply of the nation.

"And we try to make the good effects felt in homes of the region itself," he continued. "We work with the Rockefeller Foundation on preparation of dietitians. They have fourteen girls visiting homes here to teach better nutrition, so that the people can be healthier and produce more. The girls study our activities, so as to pass on to exporters of cotton, cotton seed oil, and wines,

the good economic effects of producing fresh vegetables, milk, and meat for home consumption."

I got the impression from Villagarcia and the farmers we had talked to that coordinated agriculture in this community was an active reality, that Ica could be held up as a model for well-fed, alert, and progressive communities in any company of agricultural towns.

We left Ica reluctantly about midafternoon. Had we known what was immediately ahead we would have been more reluctant. Still more desert, a jump seat getting narrower and harder by the moment, very little song, and finally a night's sleep at Nazca.

Nazca was our point of departure from the relative ease of driving along the paved Pan-American Highway. Bearing off on a ninety degree course to the left, we literally took the Andes head-on. Within an hour after leaving Nazca we had forgotten how the "camioneta" sounded in high gear. It was grind, grind, in second gear, up brief but steep grades, to complete hairpin or switch-back turns, negotiable only in low gear. More than once that morning and early afternoon we drove up to jumping-off places, girt by sheer rock wall on one side and drop-offs on the other that were more breathtaking than beautiful. At these places there was always a moment of sickening suspense. Could we get around without backing? Frequently we had to back to the outer perimeter of the curve, our streamline rear end sticking out over space, so as to swing the nose of the car in and around the cliff on the next forward sweep. At such moments I thanked my stars for Elena, and I thought even the stoical Bob must do likewise. A courageous woman, Elena could only negotiate these passages in silence, by freezing on to Bob's arm on the one side, mine on the other. This had the effect of summoning in me enough nascent fortitude to sit tight and keep my mouth closed.

A healthy respect for the driver began to take form. Not an expert chauffeur in the taxi driver or even young-man-about-town tradition, this was his first experience with the rebuilt car. His driving lacked ease and refinement. It was all too obvious that he did not as yet feel himself a part of his car. But at all times he was cautious, sometimes boringly so, and in the pinches his determination was superb. Should anything happen, and up there it was

easy to imagine the occurrence of dozens of unpleasant things, we felt instinctively that it would not be the product of the Salas boy's negligence. That led to a tacit agreement against backseat driving which even I, who had grown up with American-make cars from the time of the old "side-winders," dared not abrogate. Crawling up and clinging to the fifteen to twenty-foot trail of gravel, which itself seemed to be nothing but a tentative water-color streak easily washed off the grimly permanent and permanently grim mountains, was a tense experience permitting no distraction whatsoever. At times I felt that we had muffed our opportunity to employ reasonable human foresight, that our six-cylinder job and relined brakes were too frail to buck into or hold on the up-and-down drops ahead, that it was asking too much of the Salas boy to meet the strain of driving when the slightest brake drag could throw us into a thousand, two-thousand-foot drop, when a slipping clutch would send us into a wild plunging beyond the power of any four-wheeled brake system to hold. I would not even think of a blowout. I had a superstitious feeling that this might put a curse on our vehicle. Humbled by the ludicrous picture of our tiny truck hurling itself in antlike fury against the endless earthly convulsions, while we "master-minds" sat terrified on a torturing jump seat, I consigned the whole foolhardy expedition to the attention of a benevolent God and was convinced that if we got through at all it could be attributed only to a manifestation of Divine good humor.

Where we first started to crawl up and into them, the Andes belied their sharklike appearance from the air. They were loose, seemingly not at all well held together. There was little if any vegetation on them, and in them no privacy. The boulders did not run to craggy contours. They were smooth, rounded lumps all running to copper in color and piled up one atop the other, as if some incredible giant playing in an equally inconceivable gravel pit had scooped and patted them up into mastodonian undulations, scallops, and ovoids, and gone off and left them that way. Looking at them I got the insane feeling that they would fall apart at the slightest cosmic shift and simply roll off into the desert on the one side and the jungle on the other.

But that was before we really got into them; before it became

depressingly apparent that the Andes were there to stay, that in their grotesque moraine swathes of the high plains, and elsewhere with their igneous, metamorphic, or sedimentary strata seismically tilted or crushed in an unearthly jumble of crag and crevice, the great cordillera was all too definite, too cruel a part of Peru and her sister republics of western South America.

Lightheaded and a little inane with the relief of it, we finally came out on the "puna," or one of those broad plateaus of high Peru. Were we on the famed altiplano of Bolivia and Peru, I wanted to know?

We were not. I settled back resentfully. I had already begun to feel we would never make it. I could never have marked the spot where we came out on to the puna. It just seemed that suddenly we were there, in its midst, back of us a hazy rim of tiny molchills and mere ripples of mountains beckoning toward the rosier comforts of civilization. Ahead—far, far ahead—were foreboding smears of wet slate deployed across the limits of our vision like enemy battleships hull down on the horizon and bearing in for action, their superstructures only dimly discernible in the lowering clouds of dirty weather.

Between this approaching enemy and our now sputtering automobile, the great upper prairie rose in billows to be lost in relatively small patches of white. We were getting up to the snow line. Since the sun at that time of year, and after a popular way of speaking, was pursuing its northerly course across the earth, that would bring the snow line down to anywhere between fourteen and fifteen thousand feet, depending on other weather factors.

I thought what a foolish thing it was for us to have selected that time of year—the South American winter—to go up fourteen or fifteen thousand feet, but decided not to molest the others with this bit of petulance. The llamas, alpacas, and even the graceful vicuñas were beginning to annoy me, particularly the llamas. Heads down in the stubble of "ichu" grass upon which they fed, and the "chillihua" grass which the Andean human uses for roofing, the llamas were big, black, white, or brown balls of fuzzy-looking warmth. Whole herds of them dotted the uninviting plain. They suggested that even here there was domesticity of a

sort, and that the least we could expect would be a look of bovine welcome in their eyes.

Not so the haughty llama. As the sound of our groaning engine reached them up would come giraffe-like necks like so many jacks-in-the box released by a common spring. Noncommittal as camels and with thick lips framed in the camel's supercilious smile, or perhaps spitting at us, they would stare for a moment, then in ridiculous, prissy leaps, like those of self-conscious members of a schoolgirl ballet, they would sweep away with no noise that we could hear.

"An utterly 'unsimpático' beast," I muttered.

Bob seemed to agree, and even Elena, who had a penchant for finding some good reason for everything and something good in everything, let it pass. The rock formations, or rather the glacial leavings, next came in for my displeasure. They refused to look like rocks. They were hunchbacks, or squatting toads, or dead dragoons of General San Martín's armies, frozen and petrified in their tracks. All seemed graceless, even malevolent; fit company for the grinning llamas and alpacas, and the too utterly shy, though appealing vicuñas.

"Ed," said Elena suddenly, and in a flitting moment I could recall as semilucid, I thought I saw concern in her eyes and Bob's, "you must be quiet. Try to relax."

Evidently I had been talking rather wildly, recounting my impressions of the high country in exaggerated terms.

"With the soroche it is best to be quiet," said Bob.

Soroche again! I took stock. Sure enough, there was the sensation of eyes starting out of their sockets, a humming in the back of the head, the feeling that bones in my injured back and leg were fully rotting away, jumpy nerves behind all my perfectly good fillings. To cap it all, this time I was experiencing something just this side of acute nausea, was wishing that I could be sick and be done with it.

I took hold of myself, checked the others of the party. How were they feeling? Oh, just fine, or well enough, or nothing to worry about!

It was as good an example of heroic self-delusion as could be wished. All were as sick as I. I suspected one or two of being even

worse off. But my real worry was concerning the driver, our taciturn, patient, stubborn young chauffeur. His reactions to previously voiced suggestions that I could take over when he grew tired had indicated that rather than relinquish the wheel of his cherished heap he would cheerfully drive himself to death. I felt I must assume the responsibility of seeing that soroche did not drive him to his death and perhaps ours.

Then white puff balls were striking and melting against the windshield and the straw stubble had given way to rotten stone showing here and there through the snow. We had been climbing slowly in a laborious high, now had to shift down to second, then down to first to come out of a brook depression. Then we stalled! The engine simply would not pull against the easy slope ahead. Our driver got out.

"Whatever you do, don't touch that carburetor," I said crossly. It had been obvious for some time that we were losing power from faulty carburetion. Yet we realized by now that there was not a first-class auto mechanic among us. Even an engine that would only idle in the thin air was better than one completely choked off by inexpert fingers.

"Then you'll all have to get out and push," said the Salas boy. His patience had become a thin and fragile thing, drawn about him like lace across a prima donna's throat. We got out and we pushed. Rather we leaned into the truck as heavily as we could while we gasped and fought for air. Slowly, coughing and dying frequently, the gallant old car crawled up fifty yards of incline, and then, hesitantly, as if choosing between its own salvation and ours, began to creep away from our pushing hands. The driver brought it to a gentle halt, and got out.

"Good," he said, giving an arm to Elena and looking us all over with new respect. "Now I think we can make it. But get in—and rest as much as you can."

We inched along the circumference of a bald stone mountain, one of the gray bulks we had seen from across the plateau. Its surface apparently was too slick to hold wet snow. Once again we had to help the car, but this time went at it slowly and unexcitedly. An understanding seemed to have sprung up between us, the disanimated humans, and an inanimate machine.

"The old crate wants to help, wants to get out of here as much as we do," I muttered to Elena and Bob. The words were without whimsy. It did not seem out of place for the car to become as much a person as any of us up on the puna. I don't think I would have been surprised had it produced a crutch with which to help push itself along.

"Anything," I confided to myself and my soroche, "can happen up here."

We smiled wanly at each other as we stumbled back aboard. We felt we had the combination now. Dependent as we were on the car, we knew now that it in turn was dependent on us. With full partnership thus recognized and openly acknowledged we expected to pull through.

We did not have to push again. Once around the bald, wet, gray mountain, we saw that the other hulking obstructions were far across one of those Andean gorges, their immensities throwing the vast depth and width of the valley itself into complete disproportion. We had been five hours crossing the puna, and now we began a slow descent sometimes reaching far back into the gloom of mountain folds before switching back again to come out in dazzling sunlight, which struck across the peaks above us to make a broadside target on our side of the valley walls. Around and back, back and around, we seesawed, ever coming down a little, always hoping that somewhere, somehow, we could make a straightaway run for the minute village we had seen far down the valley when we first slid over the rim of the high plateau.

Eventually we got to this village—a huddle of stone huts with chillihua grass roofs. In one of them we found a dim little store or "cantina." No sausage, no bread, no canned goods. The señores must remember that this was just a tiny mountain town, and there was very little demand for such fancy things. We could have "aguardiente" (cheap spirits), and there was something left of a head of cheese and some crackers. We settled for the cheese which we could break by pounding it on a rock, the crackers, and an ancient bottle of mineral water which the proprietor finally found and dusted off. One of the patrons, an elderly Indian with coca-stained teeth and a reek of aguardiente, protested

loudly at the infamy of washing down good food with water. We went back to the car to finish our snack, the first food since breakfast, almost ten hours ago. I recalled that hungry Indians find some forgetfulness by the narcotic effect of chewing leaves from the native coca plant.

"That man," said Elena, "he was beside himself, he was drunk." She spoke in some anger, but mostly in sorrow. Elena had more than a casual feeling toward the downtrodden Indian of Peru. But I had not yet plumbed the real depths into which four hundred years of unfriendly circumstances had thrust him, and had developed no particular attitude.

"Hell, Elena," I said, and I was thinking mostly of where we were and where we still had to go, "if you had to live day in and day out in a place like this, you'd probably be drunk yourself!"

We chomped our food in silence. I had a notion that Elena was close to tears. It was not to be the first time on that trip that I was to come up against the realization that this was a woman of great heart, and that most of it was passionately dedicated to doing something to bridge the deep fissure between widespread ignorance, filth, and poverty on the one hand, and mass wealth such as she had seen us enjoy in the United States, on the other. Bob, too. He was loosening up, now that we had been jump-seat companions for more hours than we cared to count. Or perhaps it was the soroche that loosened his tongue. At any rate both he and Elena were given to seeing double as we crawled painfully through those interminable mountains. They saw high Peru as it was. That they could not help. And they suffered. But they also saw it as it could become, as I could see it. And, barring the soroche to which I knew I could eventually become immune, I could believe that life in the Andes at its current worst would be scarcely more rigorous than it had been in the deeper Blue Ridge, Big Smoky, or Rocky Mountains scarcely a generation ago, not necessarily as hopeless as I had seen it deep in Calabria, Italy. For the future, we could all three get a little dizzy about hydroelectric power sufficient to light up whole valleys, run mills to grind the grains from the highlands, hoist cable cars laden with tropical and semitropical produce from the gentle climates of the deep gorges to the more arid communities above.

"Fuerza y producción" (power and production) were words that kept repeating themselves. Giving free rein to soroche-fevered imaginations we could pooh-pooh the verticality of the whole brusque countryside, and festoon its cliffs with cable cars, cog railways, cargo lifts, and, of course, more and better highways. Was there not abundant water power at the bottom of every major gorge to generate electricity from a whole chain of TVA projects? The costs? Ah! That was something for the engineers, the economists, and other technicians to figure out! Certainly they must see that Andean development would pay for itself, no matter what the original cost!

"And they are such beautiful people!" Elena was talking about the Indians.

"What kind of hopped-up pollyanna is this?" I thought, and bit back the actual words.

"I'm sorry, Elena, but they don't look beautiful to me."

"Why," she snapped with the nearest thing to anger I ever saw her summon, "you yourself have said so dozens of times on this trip. And you have already used up half a dozen rolls of film taking their pictures."

She had me. And I had to thank her for clearing up a picture of the Andean Indian that was being improperly photographed in my soroche-dazed brain.

In the back of my head was a challenging injunction from Colonel Arthur R. Harris, newly appointed president of the Institute and Educational Foundation, who was to take over from Colonel Gotaas while I was on my trip. He himself had seen the cooperative programs in action in Mexico, and had said:

"You'll never get the spirit of these programs until you talk to the young people and the children and realize what they mean to them."

So all along the line of march in Peru I had been talking with children at every opportunity, taking their pictures, and listening to their chatter as they talked to the cooperative service people.

"You have said many, many times, and both Bob and I have heard you," Elena pursued relentlessly, "that the children, especially the Indian children, are perfectly beautiful. And I've heard you exclaim over some magnificent specimens of Indian men and

women you have seen, wishing you had been quick enough to snap them."

"Yes, Elena, yes! But for the most part they mature and fade so quickly. By the time they reach twenty or thirty they are old, bent, beaten down, hopeless looking."

"Those are not racial characteristics," Bob ground out savagely. "Some people lay it all to coca and aguardiente. But mostly it is sheer, brutal overwork. The new Peru cannot be built, these mountains will never yield, so long as we try to conquer our distances with the Indian as pack animal."

More impressed than I could indicate at the moment, I alerted myself to the Andean Indian during the rest of that creeping journey. I came out of it with a wholesome respect for the insight which had prompted the young Peruvian, Haya de la Torre, to proclaim that Andean America must look to the Indian and mestizo as the prototype of physical beauty, rather than to other races. After Bob and Elena had jacked me up, I looked for and found dignity in the patient aquiline features of bent highland workmen and their women. I saw nut-brown little boys and girls, with straight bodies, flashing teeth and blue-black hair, whose rosy cheeks gave them ripe beauty to offset the rags in which they were clothed. And on occasion I noticed straight-bodied, full-bosomed young women, whose lives had so far been less burdensome than those of their sisters, and who seemed eminently fitted to produce and rear a race of men as heroically beautiful as the Incas from whom they had descended. To me, a Teutonic blond with a thin, freckled skin never yet successful in a bout with the sun, it seemed entirely reasonable that Peruvians would prefer an Incaic type as their ideal, especially over the blond Nordic, and even to the pasty brunettes of "continental" cut, over whom our own bobby-soxers were inclined to swoon.

Bravo, Bob! And Bravo, Elena! Bravo, for making me see the real Andean Indian, not just his dressed-down, at times degraded, caricature.

PRE-INCAIC PROLOGUE

I COULD never remember much of what happened just after we got to the next town. I did recall the Salas boy saying tiredly "this is it," and later coming out of a semistupor to find that I was in a cot, fully dressed down to the mosquito boots I had bought in Iquitos, and with all sorts of odd clothing and blankets piled on top. It was dark, except for a candle struggling to make a flame in the thin air. Other pinpricks of light came up through the knotholes and cracks of a thin pine floor which served as ceiling for the dirt-floored cantina below. It was cold with the bone-aching cold of dwellings that have never known heat. Bob was pacing the floor, back and forth, back and forth, muttering and hissing between his teeth.

"For God's sake, Bob, what's the matter?"

"Elena," he yelled. "Come in. Eddie's come to!"

Apparently Elena had been trying to rest in another room of the second floor of this combined stable, hotel, and corral, a second story effected by the simple expedient of slipping some boards together on a pole framework which rested on 'dobe walls below. She came in heavily muffled and pale, smiling nevertheless.

"Don't you ever give up?" I asked, and I felt unpleasant about it.

"Elena," said Bob, and he too did not seem overly pleased, "is a rock." He pronounced it "roke." "She has not the comprehension to know when it is too much."

At this I could not help smiling. Here we were, like two small

boys, half resentful, though we knew better, at the evidence that women in many ways are more enduring and durable than men.

"I could use some of that 'roke' right now," I said, struggling up from under the heap of stuff on the bed, and finding the effort a little too much of a strain.

"No, Ed," Elena commanded. "You be quiet. Bob, help with the boots."

I let them help with the boots, muttering something to the effect that anyone foolish enough to come to such a place ought to be willing to die there with his boots on. I loosened my shirt collar myself and lay back exhausted, quite willing to die with or without boots. I heard Elena ask Bob to sing.

"No, Elena," he exploded. "Tonight I do not sing. It is too much. This is the most miserable place, not only in Peru but in the whole damn' world."

We talked. Far into the night we talked. And it was my night for gilding the lily. Though both Roberto and Elena had lived lengthily in the United States and were warm friends of our Union I found myself passionately, even though gratuitously, defending my homeland. Soroche can be like that. It is as sure-fire as alcohol for inspiring pugnacity. To Bob and Elena that night I could easily, if mistakenly, attribute the most supercilious of attitudes toward the good old U.S.A. Out of dim consciousness came that old Prussian dismissal of my country as a land of "soft" people. And I took up uninvited cudgels.

"If it is soft to work hard so that we can have such things as hot running water even in places like this, electric lights, warming pads, a decent bathroom to be sick in, then I want to be soft," I said furiously. "I'm for that kind of life." Then in a long disconnected burst that nevertheless made complete sense to me, I went on in a challenging tone.

"You say we are too mechanical-minded, think about nothing but our own comfort, and how to spoil our women, but you'll notice our boys and girls did all right in the war, and I'll bet either one of you would have given anything for the sight of a hot dog stand up on that blasted puna today!"

Then I veered toward tradition, thinking to claim a good one for my own country in this Andean world of tradition.

"If we have any dominant tradition," I said, "it is one of looking hopefully ahead. That started with the Pilgrim forefathers. There was nothing, looking backward, that would incline them to nostalgia. So they went ahead at the job of building the colonies. They could not live long with the idea of themselves as colonials. So they made a country of their own. Step by step, generation by generation, we have continued that job. Maybe some of the things we have built are not of the best. But they are all ours, design and structure. WE have been on our own since Plymouth Rock. That gives us a great psychological advantage. Since we ourselves have done all the building in our country we can approach the job of tearing down and rebuilding that which we later disapprove with clean hands and clear conscience. I have heard Europeans say that we are a mongrel race, holding nothing sacred. That is incorrect. We are not mongrel, we are mixed. Rather fortunately mixed, if you will look at our immigration records and their results. And if we hold one thing sacred above all others, it is the right to correct our mistakes as we see them. That in itself makes an honest mistake pardonable. In that sense we have a free country. Few, if any, worn out but binding traditions, imposed by some older way of life in some older land."

That was the gist of what I said. It did not come out as coherently as I later set it down for transcription here. No opponent of exquisite language in others, like many of my countrymen I had never properly developed the art in myself for fear, I suppose, of being set uncomfortably apart from the herd. I chose homespun language because I commanded little else, but even if I had been forensically perfect, the conversation of that night would have been somewhat disjointed. Bob and Elena frequently interpolated. Each, in his own way, was passionate on anything that touched Peru, the future or the past of Peru. They liked my exposition of the beginnings of national psychology in the United States, compared it with what had happened in Latin America.

"What a different beginning from ours!" Roberto mused. "You with your little bands of pilgrims, fighting for a chance to make little communities, little homes in a cold, uninviting land. We with our swaggering conquistadores, our rich and glittering

vice-royal courts, and the psychology of the captains-general . . . a system in which everything was of a tentative nature and dependent on the whim of the King's men. Even our own protection was a matter, when they chose to attend to it, for the King's soldiery.

"And our resources," he continued. "When were they ever of and for Peru entirely? In the early days we never had settlers in the sense of people going into the country to make homes and a homeland. Our mestizo people are only coming around to that now. Before that, exploitation. The Spanish colonists, the latifundistas [absentee landlords] the . . ."

"Go ahead," I prompted. "Say it . . . the dollar diplomats and Yankee Imperialists . . ."

"Well, yes. At any rate Peruvian economy has always suffered by the fact that not enough of the earnings of its national resources are spent right back here in Peru."

"But Roberto," I argued teasingly, "the whole uncontrolled pugnaciousness of nature in your country makes the latifundista system understandable. Certainly if I had a paying property in mines, or cotton, or even guano, I'd be tempted to find somebody else to run it, and live off the dividends in Lima, Paris, New York, even London."

"You will never get that chance, my friend," he countered swiftly. "No, Eddie, I think those days have gone. Foreign investment, yes, of course. Colonial exploitation, no, no, and no! We wish to build a Peruvian nation, not a Peruvian business!"

Elena moved quietly toward her room. Bob continued talking for a while but his voice became a pleasant drone which I attempted neither to interrupt nor answer. This was sleep holding out its lovely arms, not soroche with its aching warnings of blackout. I drifted off trying to remember that what I had heard that night was the voice of the new Latin America, a voice which Nelson Rockefeller and others had told me would *not* be denied. It was a voice confident of the sincerity of a strong power in the north, a stirring call to the people of the other Americas to carry on with the economic advances tempered in the heat of a joint war effort, bestir themselves toward a better level of living, fill in the gaps between their appetites and needs and their ability to

produce and procure. It was vastly comforting to know that I had been privileged to recognize this harmonious new sound in a world full of discordant noises. Finally I was at ease, and then asleep.

I woke up the next day with a stevedore's appetite and a zest for living that had me a little chagrined over what we were soon calling our "yearnings and agonizings" of the night before. Bob and Elena seemed to feel the same. We got back on an excellent footing by twitting each other over our more vehement passages. It was good tonic.

Out of what we came to regard as our "valley of unvarnished truth" we climbed for hours and hours, and never seemed to get anywhere. Actually, four hours after our start, and only a matter of minutes from the last view of the town below, we again broke out onto the puna. This time it seemed a little softer, more inviting. Cattle and goats mingled with the llama herds, showing that we were a couple of thousand feet lower than we had been on the other side of the rim. There were more Indians, women, and little girls wearing the inevitable wide-brimmed hat. We would meet couples or groups every few miles, patiently hauling their scraps of eucalyptus bows to their huts. All the women wore shawls, most of them used as hammocks for their infants. Nearly all carried a mass of sheep, llama, or alpaca wool under one elbow. From this bundle they fed wisps of wool on to a spindle which strung it into a rough thread. This was a one-handed operation, with spindle dangling and spinning steadily away, no matter what the other hand was doing. The latter was usually occupied with the baby, the driving of burro, or cow or goat. There was a peculiarly advanced type of dexterity here, one that left me with the impression that the women of the high country received the gift at birth, that it could not be acquired any more than a person could acquire an extra hand or a spare set of eyes.

On this puna there was less glacial deposit, and the sweeps of yellow chillihua and ichu grass seemed better nourished. From about 12,500 feet upward we proceeded through herds of llama and alpaca with bright red or blue ribbons in their pierced ears. They seemed more accustomed to passing vehicles, stood a "heads up" parade without scattering as we went down their

ranks. When our course over the plain dipped below 11,000 feet we found ourselves among the more familiar sheep and goats, and below that for our added comfort were herds of cows, some burros, horses, and—welcome sight—His Majesty the Pig.

Ours was a course taking us through one sweep of puna to another, climbing or winding around intervening ridges that by themselves in a different locale might be considered whole mountain ranges. Our road was one of the many fanning out to the four winds from Cuzco, a recapped twenty-five-foot affair first laid down by the engineers and administrators of the Incas. The bridges frequently were Incaic suspension bridges, refurbished with steel cable and concrete abutments, of course, but given to swinging suggestively as we rounded into them from hairpin curves and our momentum was transmitted to them broadside.

We had reached the center of Incaic and pre-Incaic civilization. Here was the ghost of history around us at all times. Cuzco had been the capital of that great Indian civilization which has been described as one of the great, centralized empires of all times, and which fell to Pizarro in 1533, after Atahualpa had been captured by ruse and put to death.

Yet to me there were distressing evidences of an all-too-recent dark age intervening in the Andes between the early colonial times and the revitalized spirit of Peru so ably explained to me during the past few days by Bob and Elena. It was a smear of ignorance and poverty lying across Andean history, something like the blackout of the Dark Ages on the continent of Europe. I thought that it was just the sort of thing that Hitler had been planning for the world, including the people of his witless ally, Benito Mussolini.

Enrique Olivarez Cabrera, Cuzco extension agent for the now familiar SCIPA brought this theme down to its modern day record of accomplishment in behalf of the Andean Indian, and thereby pointed up the lesson which Cuzco held for me.

From the moment we descended into the city through the eucalyptus arbor that reaches up and over the city like the plume of a casqued knight, I had been aware of a set of things and circumstances that were trying to give meaning to some daily, humdrum experience of the past. What was it in my everyday

life back in Washington, I wondered, that was trying to break through prosaic memory to help me define and appreciate this ancient capital of the Incas? What was it that I already knew about this city? It was like having the name of a well remembered friend suddenly become elusive.

We had poked around Cuzco like so many idle tourists. We sat in the park, always preferring the sun, we lowlanders, to the shadows cast by the huge bell towers of the university that had been founded in 1598. We visited the show places, feasted on the scarcely to be believed wood carving of the famous Pulpito de San Pablo, visited the massive pre-Incaic stone buildings overlooking Cuzco. I could not get enough of photographing the pink, blue, yellow, or plain varnish balconies and casements, many of them hand-carved, which provided a Mediterranean galleon leitmotif high in the crests of this mountain world. We never failed to marvel at the fact that a majority of the larger buildings in Cuzco represented three to four architectural ages, their strata clear even to the uneducated eye. The Church of San Domingo, for example, was Spanish Colonial, its Moorish arches on twisted columns and its latticed cloisters a direct transplantation from old Andalucía. Yet it rose above the timeless gray footings of the Incaic Temple of the Sun. Other buildings were colonial, standing on Incaic or pre-Incaic foundations, and topped off finally by structural additions too modern to escape the suspicion of being gimcrack. We saw all these things that any tourist could see, yet I knew that my mind's eye was missing something.

We had taken the gasoline coach down the railroad line to Macchu Picchu (7,680 feet), site of the new archeological discoveries of pre-Incaic ruins. There we could see for ourselves that Incaic and pre-Incaic genius had been great. These forebears of the Indians all around us must have been infinitely patient and ingenious, as well as strong, to have assembled the tremendous pile of carefully keyed and fitted stone that was before us in attestation of their genius. In the odd-shaped boulders, smoothed and fitted together with wisdom and an overall sense of proportion transcending the lack of tools and patterns, there was ample testimonial of greatness. Yet, like some of the algebra and trigonometry of my school days the synthesis of the things escaped me.

I had to accept it all as fact without really getting the "how" of it. The historical gap was too great.

Olivarez did much to bridge it, however. A slight red-cheeked man of medium height, his gestures were those quick manipulations of hands, shoulders, eyebrows and lips which add eloquence to conversation in Spanish. The red in his cheeks was the tint of altitude, noticeable in most of the people of the high Andes. In a succinct presentation of agricultural life in the ancient empire of the Incas, Olivarez drew me away from vague imaginings concerning the Indians of the past to earthy problems of the present day Indian whose productive potentialities modern Peru is trying to awaken and nourish.

SCIPA, he explained, was stimulating more winter sowing of wheat, on those portions of the 1,440,000 hectares of tillable soil in his region that would grow wheat. Cultivated on small farms of about 50 acres, almost but not quite enough wheat to supply Cuzco was raised. The objective was to increase the yield not only to make Cuzco self-sufficient in this respect but to be able to help Puno and other towns of the high country which lacked wheat. He said the same stimulus must be applied to the growing of corn and other staples, stock raising, the growing of vegetables and fruits, to reforestation, and the solving of all the myriad problems inherent in a basically austere country which had been burned off, poked at, and scratched over for hundreds of years.

"We have to introduce tools to take the place of sticks," said this young agent. "We must have machinery and must show how its community use can help everybody.

"We are well under way. We have eighteen farmers' committees at work all the time. They represent or have access to 95 per cent of the 800,000 farm people of the region, whose efforts run mostly to cattle and dirt farming on a small scale. They are seeking and earning the confidence of the little man who has four or five cows, a few sheep, some pigs, llamas, alpacas. They do it by helping to distribute selected and disinfected seed, by placing tools in the hands of farmers at cost, by working out small irrigation projects, by instructing in seed selection, fertilization, animal husbandry, diet, cross-breeding, and improving wool yield."

"A job," I agreed. "And just how far do you think you will

get with people like that?" I pointed to a couple of bandy-legged, heavy-chested, human pack animals, ambling across the plaza with burdens that must have weighed upwards of three hundred pounds. These were kept from sliding down their backs by broad forehead slings. Consciously I used a phrase and tone that I had long ago come to detest, the supercilious "Oh, those people" disparagement of phony aristocrats who actually believe that some people are born, not forced by circumstances, to serve. I was trying to break Olivarez' stride, get down to fundamentals, perhaps nettle him.

He was not nettled.

"People like that?" he repeated. "Why those are the people we must depend on most for revitalization of agriculture in the Andes. They know how to work—long, cruel hours of work. What we have to show and make them believe is that there is more productive and less burdensome work, if equally hard. There cannot ever be anything like soft work in this country.

"Through the small farmers we are trying to better conditions generally, so that the Indian can see for himself that community cooperation, reliance on better farming techniques, an effort to clean up his small tenant tract, his house, his animals, and himself, will pay off in better, healthier living all around.

"As it is now the average base figure for wages to the Indian peasant farmer is about fifty centavos a day. That is between eight and nine cents in United States currency. To earn this the Indian tenants stay on the larger haciendas for generations, cultivating small tracts and paying off the hacendado in work.

"It would all be very easy if one could simply say that his wage for day work must be increased, that he should be paid so that the dollar and a half to two dollars he owes the landlord for rent of his tenant tract might be paid by working less than the thirty days each year, which is the average hereabouts. But you must remember that there are few rich haciendas capable of providing paying work for the great numbers of Indian tenants on the premises. To make better money the Indian would have to leave the farm.

"That he will not do. He is passionately devoted to the soil, to his few head of cattle. He will not work for more money if it

means leaving his patch of soil. He prefers to stay there, living on a common level with his animals, starving himself by packing off what little produce he can raise to the nearest town when he needs money for a few bits of clothing or *aguardiente* or *coca*."

"So where is your future for him?" I persisted.

"In his very obstinacy, patience, endurance," Olivarez countered. "I speak Quechua—their tongue. I know when I am able to stir hope in them. That is all they need—hope. They cannot have that without belief in our sincerity. But when they see what a few steps in the right direction brings, they, especially the young ones, become wonderful, loyal cooperators. When they come to believe that they are an accepted part of our nation and that the nation has confidence in them, there is no end to what they are willing to do."

Then Olivarez led me back with a technical explanation of some of the country we had traversed. Cuzco had a modest textile industry, a potential consumer for all of the wool we had seen the Indian women so incessantly spooling up on the high trails. SCIPA was working in the lower valley levels toward production of edibles on the basis of two crops a year. SCIPA was working out irrigation plans to establish a sowing season for wheat and potatoes between April and June to augment the customary late winter or early spring sowings in August—the latter entirely dictated by the rainy season providing between 300 and 600 millimeters of rainfall annually.

And—striking a sympathetic chord for the Indian—Olivarez, with the assistance of the Institute, was bringing in Brown Swiss, Holstein, and other stock suited to the highlands, breeding them where their calves would best serve communities, but above all giving vaccinations himself, performing operations, autopsies, and otherwise helping the small farmers to improve their stock. In a country where the vet was often the most important village personage, these self-assigned barnyard tasks assumed prime psychological dimensions in the calculated warfare of Peru against ignorance, poverty and disease.

"The surest way to the confidence of the Andean Indian," Olivarez concluded, "is to prove to him that you are sincerely

willing to help him eat better and live better. Once he is assured of that, there is no question of his willingness to serve his community and his country."

"Do you think he will ever come back completely to what he was?" I asked.

"Never," said Olivarez blandly. "But why should he? He lives in a different world. A world in which he will not be required to erect ponderous stone temples and palaces for his emperors with his bare hands and strong shoulders.

"No," he continued musingly. "He will probably mix more and more with us until there are no more pure Indians, until we are all mestizos. If we can retain his patience and endurance in some measure, we shall be fortunate. Then we will all have a Peru, not quite so spectacular from an archeological-historical point of view as the empire of the Incas, perhaps—but infinitely more comfortable and secure for all. What is wrong with that as a future for Peru?"

"Not a single thing that I can see," I assured him, and left somewhat abruptly, I am afraid. That forgotten truism, or whatever it was that had been struggling for expression ever since I had set foot in this city of all ages was surfacing, like a submarine about to break out of opaque depths and rise shimmering to the open air. With some elation I went to my room and wrote out the words as they came up.

"THE PAST IS PROLOGUE."

That was it! Of course! The inscription at the entrance of the Archives Building back in Washington! One that I noted with one degree or another of interest every morning as I trolleyed down Pennsylvania Avenue to work. A pronouncement that had been offering itself as particularly pertinent and definitive while I tried and failed to find some other adequate way to say what had to be said about Cuzco.

"The Past is Prologue."

"Cuzco—Prologue to Peru."

I left there singularly content.

PUNO:*High, Hard Road for the Humble*

THE strains of the Peruvian national anthem ceased on a prolonged, passionate note. Immediately the teachers, fifty-six men and women, boys and girls, some blond, but most of them with the blue-black hair, high cheek bones and rich, warm coloring of the highland Indian, struck into a new refrain. They were off into the lyrics and pulsing music of the Bolivian national song.

There was no hesitancy here. None of the tight-lipped, self-conscious fumbling for the right words which my own countrymen are apt to employ when they suddenly realize that they ought to be able to give out with the song of our colors. Whether or not they could sing was a matter of secondary importance to the fifty-six school ma'ams and masters, assembled at Granja Salcedo on the shore of Lake Titicaca. The important thing to them was to have a damned good try at it.

At last we were in Puno, site of a tri-partite experiment for the improvement of the basic economic element of the Andes—the Indian—and things were moving briskly. To begin with, it was a day dedicated to the honor of the Inca Atahualpa and his race.

We found ourselves very much in the midst of things. Father Guillermo Salas, director of the farm and industrial training school for 270 boys, Julian Palacios, chief of the department of rural education of the Ministry of Education, and Zeb García, head of the Educational Foundation's so-called Puno project, all had tried to soft-pedal the festive note in favor of a full work-

ing day, but that was like trying to play down the Fourth of July at Coney Island. That undercurrent of the festive spirit which is universal when people propose to honor either the birth or death of heroes had taken over.

But a gallant try was made to honor the memory of Atahualpa with a day devoted to educational effort in behalf of his descendants. We came in for that, too. As soon as formalities were over in the classroom, Professor Antonio Valer turned to his blackboard and the whole purpose and direction of the Puno project began to reveal itself.

"Basically it becomes a question of a proper start," he told the teachers. "That is, we must start with the conception of the Indian problem and the language problem as one."

Then, as Valer revealed it, this highland teaching project with the downtrodden Indian as beneficiary, became the beautifully simple matter of putting the horse back in front of the cart. The figures he quickly chalked in on his blackboard showed that in the Puno-Cuzco area only 18.97 per cent of the people were bilingual in the sense that they spoke both Spanish and their native tongue Quechua. Another chalk stroke or two, and we learned that Aymara was the only language commanded by 38.02 per cent of the population, and Quechua was the only thing spoken or understood by 45.19 per cent of the community. These figures were admittedly rough, their compilation into any sort of statistical reliability a continuing process. Much easier to slap on the board as a reliable, incontrovertible fact was the figure showing that of Puno inhabitants 5,990 spoke Spanish only. These were pure whites and mestizos, easily counted by the nose.

"And yet," Valer said, and one could see that to him it was becoming an increasing source of wonder, "in Cuzco, where only 18.97 per cent of the population understands Spanish, the schools are conducted in Spanish.

"What we propose, what we must do," Valer continued, "is to open native language schools. There for two years, the young Quechua and Aymara will start his education in the language he has begun to understand as a baby—the language of his mother. We think it obvious that the evolution of man, his first infant

steps along the way to make himself understood and to understand, must be in his mother tongue.

"And so, if we consider that language is an integration of man's abilities to cope with the difficulties of the day, we must conclude that we cannot start the Indian toward education without ourselves starting his schooling in his language. After two years, or after we have sown the idea that education is a progressive matter to be taken in grades as he grows older and develops, then we can introduce the official, national tongue itself into his education and continue in Spanish."

During the next few days I was subjected in some measure to that feather-duster type of discipline that can make the normal school product more tough-fibered in many ways than some top sergeants I had known. Tough enough to plod unflaggingly through clogging sands of centuries-old malpractice. Unyielding enough to plug relentlessly toward the ever distant goals of what could be and should be, while human nature itself presses relentlessly in flank attack. A father of four myself, I had often wondered what superhuman restraint it was that permitted the teaching fraternity to live with whole flocks of other people's children, deal with whole groups of parents, and keep their professional record for homicidal mania enviably low. According to my friends, ours were average children, and according to my children I could average out all right as a father. It was all very nice, very regular. But it tied me to a middle level of thinking on the matter, which had never prepared me to understand teachers very well. I could envisage myself handling a group of boys, passably. And I would take my chances with the next fellow to work out things amicably with a group of parents. The two together, with responsibility to the community thrown in—never!

For me, preferably, the more tangible mores of military discipline. It seemed to me that General Marshall had proved that with a good watch and a good company commander any average United States youth could become a good soldier. I had come to this conclusion watching his methods and his staff at work in a fashionably smug country while a taunting Fascist-bred leprechaun which followed me home after four and a half years in

Italy plagued me with the fear that it could not be done—not in time!

These thoughts would have been completely irrelevant in Granja Salcedo, if I had not watched fifty-six young teachers gathered from two republics work out careers of self-denial. Comparing what I could understand of it to more familiar military restrictions, I reached the opinion that no military man on earth, or, for that matter, neither those accepted in Heaven nor consigned to Hell, could whip up a good army under the democratic system, unless the teachers with the velvety smooth, ever-burdening, ever-cleansing discipline, had first been given a chance to mold the basic material. They produced what we so blithely accepted as the average.

It was not that I accepted the idea of a good army as an ultimate goal of democracy. An important component, yes, but not the inevitable implement of international relations so raucously preached by Hitler and Mussolini. But the recently established supremacy of democracies which had finally reached the will to fight, along with all the display of training, privation, and discipline, was fresh in my mind, and I had to draw comparisons with what I had seen at home and what I was seeing at Granja Salcedo, in order to get the sense of an educational venture aimed at restoring the dignity and productive power of a neglected if not forgotten race.

The books could tell me of the immensity of the task of breaking through the suspicion of the Andean Indian and overcoming his natural disinclination to try foreign methods for breasting a civilization which he tended to deplore. Ken Holland of Unesco and Bill Mauck of the Inter-American Educational Foundation could assure me that in lining up to attack the problem jointly, Bolivia, Peru, and the United States were for the first time approaching it logically. And without straining I could understand why a race that had been seduced and abused with consistency by white man, mestizo, and "educated Indian," ever since Pizarro accepted Atahualpa's ransom and then treacherously slaughtered him, would be suspicious of anyone outside his door who pretended to do him good.

So much for the immensity of the task. Days of riding through

the back country where shepherd dogs bit at automobiles as they would at wild animals; where copper-colored men who went barefoot above the snow line called me "Father" because I was white, but at the same time had, I was convinced, their own reservations; days of riding through territory where the national language was neither spoken nor understood—these had conditioned me to accept anybody's statement that a big job, a tremendous job, a vital, noble experiment, had been undertaken and was in the initial stages of progress.

But to begin to understand just what was being done, and more particularly "how" it was being done, I first had to reach the postulates:

1. That teachers reach a degree of self-discipline, quiet in tone, but as strengthening and sustaining along their endless line of march as anything known to military man.
2. That this inner discipline must be the basic ingredient for any success in the program undertaken by Peru, Bolivia, and the United States to help the Andean Indian weave his way into a generally constructive hemisphere pattern.

With these two things in mind, I began to look for physical signs of rigorous life in those conducting the Puno experiment.

I started with Zeb García, representative of the Educational Foundation, and the coordinating agency of the Puno experiment. A six-footer and heavily built, Zeb had a deep, resounding voice, and that sort of ebullient health that makes one reexamine his own portion of physical and mental energy. He had that sure, confident gentleness of the big man, but the Spanish in him precluded all possibility of self-consciousness should an argument get under way. He could have been guest speaker at a Rotary Club, a Colonel of Marines, or with his crisp black pompadour, a refugee from a crew training table. All or any of these things he could have been any time I saw him while I was in Puno, out on the chill lake, on the high pampa, in the classroom at Granja Salcedo, at the hotel where it could be warm enough to go without an overcoat if one moved from window to window with the sun.

Zeb's job was to coordinate the work of the various agencies joined in the Puno project. Besides working with Father Salas of the Salesian school, which literally put a roof over the project

and offered it many years of practical regional experience, Zeb was responsible to the Foundation and his colleagues in the national and local educational system. He also worked as liaison officer between Lyle Pember, special Foundation representative in Lima, and Ernest B. Maes, who was pushing the Andean rural educational program from the Bolivian side. He worked. And yet I could never recall seeing him hurry.

We three—Bob and Elena and I—found ourselves pushed around considerably by the soft-looking, yet relentlessly disciplined life of the educator during those few days. We went from class to class, walked miles over the school farm, visited outlying one room rural schools, went into Indian homes to observe the effect of this international effort to relate education among the Andean tribes to community needs and to elevation of the standards of living.

The teachers we saw being taught were specializing in rural education. They were advance troops of an army of specialists who would study at Granja Salcedo. They would return to their communities, to set up nuclear schools for still other rural educators attempting the monumental task of carrying elementary education to an estimated 1,500,000 children of the region who had not yet seen a blackboard. Under the community plan of schooling the nuclear or "constellation type" system with a curriculum emphasizing practical arts, health, and agricultural training, was designed to instruct parents and other adults of the community, as well as the children.

Boning up on this sort of thing as I trudged from class to class, I could not help returning always to the beautiful simplicity with which Maes, Garcia, Palacios, and their superiors in the ministries of education had swept aside the false charts of centuries and found the right key for the right door. This, of course, was the new method of starting on a common level of intelligence with the Indian—using his language as the vehicle for preliminary understanding.

There were many other small ways in which the teachers at Granja Salcedo were being schooled for a lifetime of almost ascetic living in the villages, hidden by frowning crag, or mercilessly exposed to the elements by the high plateau. I developed

the notion that this Puno program was more of a rendering than an educational process. Presumably all the teachers had one or another degree of advanced education. Bob pointed out several university classmates whom he described as scholastically brilliant, capable men in any educational surroundings. Certainly these people had not come to Puno to revel in the fatty luxuries of higher education.

Rather they were in the rendering pot, all possible notions of an easy pedantic life, all habits leading to physical sloth or mental *laissez faire* melting away from them like so much excess grease.

Again the military life became a point of comparison. The soldier was trained to fight when necessary, otherwise he led a healthful, invigorating and promising life. For the lazy-minded, there was a certain amount of work, three square meals a day, clean lodgings, and a company commander to do the worrying.

Not so tangible were the inducements held out to the "trainee" at Granja Salcedo. For him six months or more of grading his personal ambitions down to a point where he could live shoulder-to-shoulder with his pupil—the Andean Indian. Comfort of a relative sort for him, if he could inspire livable conditions in his community. Reasonable guarantees of health, if he could stimulate better community sanitation, family hygiene, nutrition. The fine oblivion of work? Yes—in great doses, provided the rendering process at Puno had stripped him of the fleshly nostalgias which would drag him down; provided he was mentally lean enough, crisp enough, to maintain fresh perspective.

"What mental monks' cells must they repair to at night to store up the inspiration and resistance they need to face the future?" I asked Bob.

"What? I do not understand!" We were in a couple of single beds, blankets and overcoats weighing us down, the water bottles which pressed into thigh and back merely hinting at snug warmth. I could just see the prominent bridge of Bob's nose by squinting out through the channel in my own bed clothes between blanket mound and pillow.

I tried to explain my wonder at the enthusiasm with which the Puno project teachers viewed the future, some of its dreariness depressingly insistent in my lowlander's mind.

"But this is their country!" Bob expostulated, much as if he were explaining the obvious to a rather dull-witted boy.

"Not the country of that lush looking Miss What's-Her-Name. She's from Callao. She told me so. She could teach down there just as well as up on this God-forsaken plateau. She could go to the beach in the afternoons, the theater in the evenings, marry some professor or rich guy, and make a life for herself."

"But those things are nothing, Eddie. There she would be just another good teacher among lots of good teachers. This Indian educational program is her specialty. It is here she can contribute most, here that her courage and determination will be tried. It is here that she will be of service to Peru. You think she would give up this opportunity for easy living?"

"I don't know. What's her telephone number?"

That got him. That cut him down to my size, brought him within my conversational range, a peculiarly North American range wherein the impassioned expression of noble thought, will, more often than not, draw a Bronx cheer. Bob had been in the United States long enough to realize that my "Oh yeah" attitude was not a challenge to the essence of his argument, but an invitation to put it in G.I. terms.

"Hell, Eddie," he said. "We think quite a lot of our Peru. That means that some of us have got to think a great deal about our Peruvian Indians. Cristina is one of those. I don't believe she will lose by it. Any sensible person must learn after awhile that what you want is less important and less gratifying in the long run than what you can do."

"Thanks, Roberto. I see you got her name. You might as well keep the 'phone number."

He called me a "piojo" (pee-oh-ho). It means louse.

With Father Salas and Father Incrata, the latter a mountain of man with perpetually sun and wind-blistered skin like my own, I went over the Granja agricultural plant. The school had facilities for teaching the teachers how to care for farm animals, how to butcher and preserve meat. It had a tree nursery, representing years of Father Incrata's study and selection. From it the teachers could learn how to introduce needed plant life into their districts and teach the Indian how to make best use of it.

Trees, of course, were sparse on the high plateau of Bolivia and Peru, a stand of them almost as welcome a sight as water. Father Incrata had nursery specimens to show that certain types of pine, some cypresses, a tree called kollis, another queñua, and the eucalyptus would grow, with reasonable care, in the Titicaca basin, and their branches could be put to good use as poles in building.

We walked around one wing of the big stone school with its big inside parade court and cloisters, and found about thirty teachers spreading manure. They were under the tutelage of Fidel Flores, a local agronomist and farm owner, who had learned to wrest produce from the altiplano the hard way, and seemed determined to pass on his knowledge to the maestros in the same fashion.

Here Father Salas took time out to explain how a little thoughtful and fruitful cooperation can become an ever-widening pool.

Flores was one of those successful Andean farmers whom one might expect to take refuge behind custom and tradition when it came to dealing with the Indian. Why give the Indian the education and tools to become a possible competitor in a region already the next thing to agriculturally barren? There were plenty to think that way in old Peru.

Not so Flores. To him, better farming habits among the Indians, greater general production, and advanced community health and education, meant new life on the altiplano, a better civilization generally. He was willing to give everything he could to it, and the cooperative service was quick to welcome his long hours of work as consultant and instructor.

We watched the teachers with their fertilizer for a while. Flores was content with no mere lecture. He showed them how to spread the stuff evenly, hoe it, rake it, and where it tended to lump up stubbornly, to get down on hands and knees and work it into dust between palms and fingers.

"Certainly that is something you cannot learn from the books," said Father Salas. We went on.

For a while I found myself in a classroom listening to a stocky young doctor sledge home a few facts about hygiene and its application among the Indians. Here was a fresh and ingenious ap-

proach to a question that was a matter of household routine back home.

"Health," said the instructor, "is an abstract word to the Indian. Until you realize that, you cannot be of much help to him. He does not foresee sickness as a result of some particular practice any more than a child does. You have to start from scratch. You teach him hygienic practices such as brushing his teeth, bathing, disposing of his excrement and offal, simply as little things to make life more pleasant. Once the habit is formed, then it is time enough to enlarge on the scientific reasons for hygiene. But remember—first of all, see that the hygienic measures you suggest make life more of a pleasure to him."

This was Dr. José Marroquín, borrowed from the Ministry of Health to head up health instruction in the Puno project.

"One of the best ways to bring this about," he continued, "is for you yourselves to be unfailing examples of what you teach the Indian. Make it your pleasure to be that way, so that every time you step into an Indian hut you will be an object lesson to the family."

The teachers, Dr. Marroquín went on to explain, must learn some of the elements of preventive medicine, proselytize it in Indian villages. In doing so they must seek always to help the Indians to discover their own health measures.

Then came a brief outline of what was proposed under the Puno project. Among students of the village schools, Marroquín's program called for selecting Indian boys to act as sanitary auxiliaries. Since the mestizo was still widely regarded as an exploiter of the Indians, these boys could penetrate many psychological barriers, awakening the Indians themselves to missionary work in this line. Each nuclear school center would have numbers of these hygiene messengers to carry the word of the preventive medicine being taught in the school, and each nuclear school would have a medical assistant to care for cases brought in.

Then Marroquín launched into specific instruction on how to spot tuberculosis, intestinal parasites, scalp and body lice, and other things requiring segregation, special care, or immediate hygienic treatment.

I went on to find out what was meant when our teachers talked

of educating the hand of the Indian. This took a little study on my part, because I had watched the Andean women spin out llama wool with one hand while whipping up a burro with the other, and I failed to see what skill a white instructor could contribute.

"But that is not the point," said Elena. She, too, was busy taking notes for her magazine. Dear Elena, wonderful, indefatigable, helpful Elena. She would drive me to distraction one minute, by making a picture suggestion when the snapshot opportunity had passed. The next instant, perhaps, she would be in there pitching, despite my gibes or rudeness, helping me to get the accurate, the only correct slant on a situation.

"The idea is to build on their natural skills, make them aware that they have something marketable, show them that it can be worth their time to develop their own aptitudes and cooperate in developing those of others."

So I listened carefully while Professor Manuel Teran Macedo, industrial vocation director, charted out the cooperative efforts in this line.

"We try to teach them to apply themselves to things that will be of immediate value right at home or in the village," he said. He turned to his blackboard and took up a piece of chalk.

"This board and chalk were made right here," he said. "That may seem like little. But in the Andes our teachers have always been shy of the simplest teaching materials, like blackboard and chalk. Yet in our own mountains there is abundant slate and chalk for blackboards. Believe me, the boys who made this set are proud . . . can't wait to start others."

The industrial educator had a counter, something like a drug store counter back in the States, stacked with specimens. In jars were a number of cereals, some wheat, some corn, some maize, but mostly something I had never seen before.

"It is quinoa and cañihua seed," he said. "They are native to the puna. Bread made from them is rich in vitamins. Though it is all around them, the Indians have never realized its worth to them in food to give them strength and good health.

"We can make our own tooth powder and paste out of 'creta.'" He held up a pumice-like substance. "So, when Dr. Marroquín

teaches the Indian to brush his teeth he can produce a dentifrice the Indian can afford to use. Flavored with muna, a tasty herb of the region, it can be sold without radio advertising."

Out of one jug Professor Teran Macedo rolled a bunch of hard pellets. As they came to rest on his table they turned out to be heads and figurines, the classic Indian face and llama motif predominant. They were ornamental buttons made of clay, smart and colorful in various baked-in tints.

"There are so many things the Indian can make and sell to his advantage and to the advantage of his community under proper marketing conditions," he continued. "They quickly master shoe-making, are adept at wool and grass weaving, can do wonders with leather and horn." Later he showed us alpaca wool rugs, some big enough to cover a small ballroom, woven by Father Salas' pupils. Rugs of fawn or grayish white bordered in black or white, thick enough to sleep on.

"We are teaching the Indian to process kelp from Lake Titicaca, and guano from the gulls that abound here and on the puna." This required a cross-note for my Potomac River Power Squadron friends. To a salt water boatman the idea of sea gulls screaming over the tremendous flats of some of the highest mountains in the world would seem odd. I saw them. Perhaps they were not sea gulls, but that would be only because of the absence of the sea. The birds were gulls, white twins to those that defile the channel markers of any salt water port the world over.

We drove out to the village of Ojerhani, smack on the shores of the lake, a place where a nuclear school had been established.

It was a little whitewashed building, windows cut in the 'dobe to welcome light and air. Inside were the usual carved-up benches and ink-spotted tables of grade schools the world over. The walls were festooned with childhood treasure. A "museum," so labeled, was a wall box proudly displaying buttons, bits of grass and wool weaving, miniature structures, and dolls—eye-catching things, most of them showing considerable juvenile skill. Another box was painted with a red cross and was labeled "hospital," and there were cleansing brushes, beribboned bits of soap, bandage rolls, and clean kerchiefs. Along another wall were larger objects—

several stiff brooms of the type used as steeds by the airborne witches of our own fairy tales. There were wooden farm implements, some samples of expert thatching, and a miniature straw boat.

This last I examined closely. It was really roll after roll of straw built up like the buns of a woman's modern "upsweep" or "glamor girl" hair-do. For the bottom the rolls were bound in tight parallels and raked up fore and aft, to be bound and spliced into the ends of larger side rolls which were drawn in at stem and stern so as to belly out amidship like any double-ended craft. "It is more of a raft than a boat," I commented. "A wet one at that."

"Yes," Zeb agreed. "But remember that it is made of the only material for boat building that the Indian can find around here. There is no wood, not enough anyhow so that every fisherman can build or buy a tighter wooden craft. Do you think you could do as well with the materials at hand?"

I let that pass. We went aboard a wooden sailing sloop for a brief cruise on the lake. It had a sturdy hull, a deep, heavy-ribbed affair—a fine vessel for foul weather. Rigging detail caught my eye immediately, and I wondered at the temerity of Titicaca sailors. These were the details: Top lift and main sheet—rawhide strips, pieced out with fragments of twisted cotton or wool cloth; bowline, sternline, halyards—chillihua straw, three-strand plaits like a school girl's pigtails; stays—baling wire; mast and oars—hand-hewn eucalyptus poles, spliced in places, and knotty.

"They do their best with what they've got," Zeb said defensively. He seemed to sense how my mind was running. "The trouble is they do not have enough of it."

"Now, Zeb," I chided, "you're a school teacher. What are you trying to say?"

He laughed and explained.

"Oh, I just keep thinking that the main problem is to get them to develop and husband their own resources to better advantage," he said.

"Put it this way," said Father Salas. He had been an interested listener. "We have been caught between two things. In my school we have had to watch the Indian boy we have given an educa-

tion go back to the ways of his father after leaving school, or, on the basis of our teaching, leave his homeland to seek a better, easier living in the city.

"This experiment in educating the Indian, this concerted, friendly, cooperative attack on an old, old problem, arouses the hope that the two tendencies can be brought together. Instead of using education as a means of escape from his mountains, the training stimulated by the cooperative project should convince the Indian that education will help him to make things better among his father's people.

"This is an old objective. The fathers of the Granja have had it before them through years of teaching Indian boys to make their own uniforms, shoes, learn vocations and trades. When we found that the cooperative services representing three countries had worked out a program which has every hope of success, the least we could do was to open the doors and services of our staff of the Granja to them."

I had to make revisions in an old mode of thought. I had come to regard the priesthood generally as reactionary, close-grained obstructionists to liberal influences in education. Here, at least, was an ordained educator with vision as broad as anything current in the lay schools. Into the discard went another generalization.

We set out from the Granja one afternoon to watch a demonstration in fitting the average Indian budget of edibles into a culinary scheme both tasteful and healthful. A dark-haired girl with gleaming teeth, pleasingly strong features, and enormous black eyes, was the leader of the expedition. Hers were the kind of eyes that never just looked at a person. They swept him aside, pinned him to the wall, or enveloped him with approval. This was Cristina Raez, the girl from Callao, nutrition expert who could look forward tranquilly to a lifetime of service in the forbidding cordillera. With us, too, was Señora María Asunción Galindo, whose work at the Ojerhani nuclear school had made the neighborhood whitewash-conscious. Gloria Raquel Mujica, of Cuzco, and Alicia Benigna Ayala, of Bolivia, were other young women whose names I recorded in the process of photographing them at work in transforming an uninviting hanging sheep's carcass into palatable viands.

"Here we have the average setting," said the energetic Señorita

Raez. "In other words the average problem." I looked about me. We were in a minute corral which did double duty as a patio for three stone hovels, their roofing done in chillihua grass sod. Each windowless hutch was about eight by ten feet, their long sides forming walls on three sides for the compound. A loose stone wall was strung across the open end of the quadrangle. It served as a retaining wall for the heap of sheep and llama manure beyond, and as a suggested barrier against intrusion of possible large animals. In one corner of the patio was a small heap of stone, arranged as a one-pot twig and faggot fireplace. In it, too, llama chips would burn during those long periods when wood, any kind of wood, was hard to get.

In the patio, also, were a very old Indian woman, sphinx-like in her acceptance of all that went on about her, and several tiny children. The children showed evidences of having been policed-up that morning, but the ancient was completely and unabashedly dirty. Hers was the sort of encrusted filth that made one fear the effects of a bath. I had the feeling that the washing of her crust would be tantamount to skinning her alive.

Soon Cristina and the other girls with the "know-how" had a fire going and were doing curious things with the dried carcass, shriveled potatoes, other root vegetables and straw-like substances which were being handed them with what I thought was some show of reluctance, by the old woman. There were at least twenty men and women teachers crowded around watching as Cristina cooked and lectured.

"We are merely preparing the one real meal of the day for the family, using only those things that they have here," she said. "But you will see that there is a great difference in its preparation."

She and the other nutritionists went on with their work, while the old Indian woman, with an air of holding to something stable, something secure, went on grinding her corn. We gathered that Cristina had listed some forty different kinds of soup, available to Indians as regular fare, but which they rarely took the trouble to utilize. There were sixty main courses available during reasonable time ranges, but similarly apt to be neglected as the Indian plodded through one day after another, scarcely aware that his weariness was really hunger. And Cristina pointed out that the

Indians had eggs, milk, meat, and fruit at times, but rarely ate them.

"They sell that sort of thing in the town markets," she said. "We must teach them to build up their own strength first. Then they will find it easier to raise and make more things to sell in the market."

She was very earnest, very matter of fact.

"This food that we are preparing will feed the whole family when they come in from the pasture," she said. "There are five or six of them, the grown people, and the older children, plus the old grandmother and these younger children." She waved a spoon at the inscrutable old crone.

"In a few minutes," she continued, "you will taste this food, and you will see that it is nourishing. It is called 'mancancanci con puti,' a sort of stew. Customarily the Indians feed it to the hogs. We are showing them that they are wasting good nourishment through ignorance. We add a few carrots and onions to the paste to make it tasty and increase vitamin content, meat or mutton when it is available as it is today. When we can make them prepare mancancanci con puti and other dishes for which they have ingredients, we will have started to win the nutritional battle. It does no good to tell them of foods which they cannot get this side of Cuzco or Arequipa."

She advanced on the stew pot, filled a rough bowl, and then bore down on me.

"See for yourself, señor!" she challenged. I tried a quick retreat, but there was no escaping the laughing eyes around me.

I never found out exactly what was in the bowl. Some heavy cereal, potatoes, and other starchy substances. In the overall sense, it was a rather powerful mutton stew, and I have always been one who could pass up mutton and any kind of stew without a qualm.

"Señorita," I mumbled, as the last of the hot lumpy stuff went down, "you may be able to teach your Indian pals to eat this stuff, but I'll bet you can't make them like it."

Which, of course, was pure persiflage. I had eaten worse, much worse, stew right on Pennsylvania Avenue in full view of the National Capitol.

"Come with me," she said quietly, and took me over to the

old Indian woman. After a whispered consultation, all urgency on the part of the vital young teacher, the old woman shrugged and indicated the doorway of the central hutch. I had to crouch double to get in the aperture, and could not stand full length in the dim interior.

Cristina fumbled under some rags on a stone-bench bed and brought out a wide, shallow "cazuela" or clay dish. In it was a mess of what looked like stale vegetable greens mixed into a clay paste. I said as much.

"Ugh," said Cristina, "there is dirt in it, mixed in with the water cress they fish out of pools and ditches fouled by their cattle. Corn meal, roots, potatoes too poor for market, anything.

"And take note," she continued. "This cazuela is only half empty. That means they probably had portions out of this last night, ate some again for breakfast, and planned to finish it up tonight."

"Good God, Señorita. Aren't you going to leave them that what-you-may-call-it out there? This reminds me of the dirt eaters in some parts of our South!"

"You begin to understand," she smiled. "Of course we are going to leave our meals. See the old Grandmother out there? We want her, all adults like her to understand the feasibility of adding savor and nutrition to food. And the little as well as older ones coming in from the field, they will be glad that we have been here. They will be glad to see us return. Our experience is that they will ask that we return again and again until the family itself knows what to do to prepare mancancanci con puti and all those other dishes that they are throwing away while they eat this stuff."

"Put it away," I begged. "And let's get out of here."

I think I would have left Puno with a feeling that these people were driven by some sense of discipline and asceticism akin perhaps to the mystic compulsion exerted by the Himalayan lamas, or the fakirs of India, had we not paused to recapitulate at the hotel that afternoon.

Everyone was there in honor of Prefect Francisco Pastor of Puno, who as president of the cooperative committee came with Bolivian Consul Emilio Maure to hear full reports on progress. A big, dark man, with intense eyes ever belying a passive face, he

sat expressionless through expositions from all, including spry little Julian Palacios, Zeb, Dr. Marroquín, Señorita Racz, Father Salas, and the others.

Then he took over, and a curious excitement gripped me. Using plain everyday language, the man was speaking from his heart about his wishes for the Andean Indian, counseling the educators to face their tasks squarely, realize that theirs was a long, tough, lifetime job.

"But," he said, "take heart. It is with emotion too profound for description that finally I see this problem being attacked intelligently."

He traced past efforts of Bolivia, Peru, and the other Andean republics on the Indian problem, while I took racing notes. He recalled that as a boy he had studied the writings of Emerson, Whitman, and the life of Lincoln, and through these studies had developed a warm affection for the United States.

"But then I joined the Manuel Ugarte movement and for a time forgot the United States of Emerson, Whitman, Lincoln, and other great North Americans. We of the Manuel Ugarte movement feared that the United States had or would follow Great Britain's colonial role, a role at the time based on the inferior race complex. We were very vocal, very vehemently opposed to anything which demonstrated or portended Yankee imperialism, any imperialism based on the assumption of racial inequality.

"In this last war we were convinced that no such thing now exists in the United States. Instead, gringos, Spaniards, Indians, all of us had to unite to win the war, and did it.

"And now, in this room, we find blond gringos working with our people and our Bolivian brothers to contribute what they can to this all-important question of rehabilitating the Andean Indian, reestablishing his dignity in the home of his ancestors.

"I think that this is the real United States, the United States of those great men I have mentioned, bringing us help, and above all hope—hope that the combined forces of our thinking people will win out in solving this great human and economic problem.

"Perhaps you will understand how deeply we feel about this when I say that in helping the Indian you are helping the soul of Peru, and so our thanks to you comes from the soul of Peru."

Down went any lingering sense of mysticism about these programs, and the disciplined thinking necessary to carry them out. The quiet, spaced words of this dark-eyed man brought the whole thing out in terms of four-square patriotic concept. The way he put it, here was a problem finally recognized as belonging to the American family of nations, and one which therefore brought into play the best principles of patriotic duty. Here was the sustaining influence I had been looking for in Zeb, Palacios, Father Salas, Cristina Raez, all the others. Patriotic duty . . . Christian duty . . . once again teamed together.

I had made up my mind that I would not think in exaggerated terms of the work steadily going forward in the Americas under the cooperative impetus, for fear that it might lead me to exaggerated statement.

But the prefect of Puno started something else again, something familiar to anyone who confesses to a tightening of the throat when he hears the strains of his national anthem. Señor Pastor's words about our country smashed into my consciousness like the crash of cymbals punctuating those lyrics which describe ours as a "land of the free and home of the brave." The starred banner itself seemed to unfurl in that chilly room and gather us all into its warm red and white and blue folds. It became an international emblem, a rallying pennant for all those fighting or working for the fundamental dignity of man.

Unashamed, but a little uncertain of speech as the meeting broke up, I turned to García.

"Zeb," I said, "maybe it's the altitude, but I don't know when I've been so utterly damned proud of my country."

"You're doggone right," rumbled Zeb. He coughed and he, too, had a far-away, almost misty look in his eyes.

The patriotic summons of the work at Puno would have been enough to convince me of its intrinsic worth, but I was to enjoy still more conviction. A shy but persistent quotation found a place among the hardboiled journalistic expressions of my mind, and asserted itself whenever I subsequently thought of the Andean Educational Program. It was:

" . . . the meek . . . shall inherit the earth."

HAITI:

Invitation to Understanding

THE big plane drummed its way through that clearance sale in fleece, which is the sky over Cuba on a summer day, and I was off again. Off to pick up a thread of coverage of co-operative programs between the United States and the other American republics, which had been broken when I hurried home from Peru the preceding fall. Back I had come through Ecuador, Colombia, and Central America. Still highly colored in memory were flashback pictures of torrid Guayaquil, austere perched Quito, and Bogotá. I could recall the lovely valleys of Cali and Medellín, had become familiar with that thriving crossroads which is Balboa, had found momentary delight in the charm and grace of Guatemala, Costa Rica, El Salvador and the other countries of Central America. And I knew what it was to rollick down the shaft of the westering sun, to churn through the orchid cloud bank of the Yucatan channel to Havana, Miami, and home.

But from Peru on back to Washington my travel schedule had been tight. There was just time enough to attend to business, very little left over for the gathering and recording of personal impressions. Now I was out to observe how the cooperative programs worked down the Atlantic side of the continent and across it in Chile.

Gone was the easy anticipation of covering an interesting and non-competitive subject, which had marked my approach to the Mexican Border almost a year ago. True, both President Truman

and Secretary of State Marshall had shown their interest in continuing to develop the "servicio" type of cooperation with the other republics. But the programs had not escaped the constant whittling away of a postwar drive for economy, and I was afraid their essence might be sucked dry before I could balance my journalistic picture of them. Now time was my competitor, and I was racing down the stretch to see if I could finish my self-imposed assignment before these vital, fraternal programs, aimed at consolidating individual human dignity throughout the hemisphere, might be trodden under in a world converted into a confused peacetime grab bag.

My first stop was at Port-au-Prince, Haiti. There big Ed Dudley caught my mood immediately. With an engineer's instinct for action, he decided to do something about it.

"I don't know why people are always questioning these programs," he said. "I don't see how they can be criticized logically, and, as far as I'm concerned, they don't need any defense. But if you've got to see what we are doing in Haiti in a hurry, I can show it to you—in a hurry!"

This was on a Sunday evening scarcely an hour after I had arrived and found a cool room in a family-type hotel well up on the hillside toward which Port-au-Prince reaches like a white crested wave tossing wisps of spray against a mossy rock. Early the next day Major Edwin L. Dudley, late of the AUS and chief of party for the "Mission Sanitaire Américaine" of the Institute's health projects in Haiti, had me in an ancient command car, whooping it along the cart tracks that pass for roads in Haiti, en route to Léogane, near Petit Goave bay, one-time site of operations of Henry Morgan, the buccaneer.

The history of the Spanish Main whispered through the palm fronds at Léogane. It was hard to think of such things as health and sanitation; much easier to conjure up pictures of Morgan and his crew curing meats on the spits called "boucans," and which gave Morgan's men the name of "buccaneers." I could hear them roistering through the coconut and mango groves as they laid foundations for a thriving seventeenth century French Colonial civilization where sugar reputedly sold for as much as \$3,000 a ton, and silks, satins, and golden treasures from looted Spanish

merchantmen were bartered and pawed over in rum shops and bawdy houses. Léogane, half buried in the silt of the Rivière Rouillon, elevation six feet above the town, had that air about it, even as Ed and I drove over its old French masonry bridges and saw the beginnings of a new town and agricultural community in the dried-out tracts of a 24-square-mile land reclamation and malaria control drainage project.

Léogane and the tiny fishing village of Silot, where Morgan careened his ships, repaired their shot-shattered timbers and caulked their seams, struck me as evidence that history in the Caribbean is still a fluid thing, with customs and conditions of the present reaching back into the past for guidance. In Léogane there was knowledge that things need not necessarily become as bad as they had been recently, before they might again approach the glories of a dimmer past.

Here, certainly, was a community that should be able to appreciate the advantages of rehabilitation plans put forward as the product of trial and error methods tested out elsewhere. I indicated as much to my large North Carolina engineer.

"You've got something there," he answered. "When we first started this project, I could not wade in here in hip boots. It was all one underwater swamp, the nearest thing to dry land being a few rice paddies here and there. That was two years ago [1945]. But there have been lots of drainage projects like this in our South, most of them packed with sure lessons learned the hard way, learned as you say, by the trial and error method.

"We applied a few of the lessons in laying down four main drainage canals, crisscrossed with a lot of smaller canals, herring-bone style. You can see for yourself that it works."

We trudged over a couple of miles of the tract, on turf still hinting at spongy soil underneath. In places our paths were narrow lanes cut through second-year ratoons of sugar cane. Coconut palms were still somewhat short, but they were laden with heavy clusters of nuts. Cashew, breadfruit, and other trees were thriving. The ubiquitous mangoes were putting out fresh, yellow-green leaflets to blanket the deeper and dustier green of older foliage. And cattle were grazing on pastures which had been given a first plowing and planted to grass.

We got in the command car and drove down the main street

of the town. Most of the houses were on pilings, but at the main corner a new masonry structure of modern design had its flooring firmly planted on the newly dried ground, mutely reminding all who cared to see that Léogane was entering another dry cycle of its history.

"You see," Ed was explaining. "Back in the seventeenth century the French laid out this town and the surrounding plantations on about the same drainage principles we are using today. Just the other day we ran into an old masonry bridge over a canal following the same course we laid down. And you will notice that all through this sector royal palms are still lined up over roads long ago buried in river silt."

It was true. Both palms and mangoes tended toward the formation of avenues. Judging from their abundance and the many directions they took, Léogane must have been a very important factor in providing exports of sugar, indigo, and chocolate of the old colony of St. Domingue. Nelson Rockefeller's Office of Inter-American Affairs had once estimated that the value of these exports as reported in papers dealing with the year 1791 would reach a total of \$50,000,000 at current market value.

But there was another thing which indicated that Dudley's work was one of restoration rather than new construction. The people of the reclaimed area had the air of having been there before. The women were already using the clean flow of rain and subsoil seepage in the concrete canals to wash their clothes and themselves. A laughing, happy lot, they, their men, and their dozens of children were already forming their neat little compounds with bare earth swept to table-top smoothness. Their few head of stock, mostly burros, goats, pigs and a few cows, halter-strung against wandering too far afield, had possession of the numerous interlocking lanes.

"The people look as if they had come up out of the water with your reclaimed land," I told Ed.

"Hardly that," he grinned. "But it didn't take them long to make themselves at home. You see they're used to grabbing at the slightest opportunity to work a little piece of land. That's been their history since Spain granted France this end of the Island of Santo Domingo back in 1697."

He traced history for a few moments, recalling that the popula-

tion of Haiti in 1790 had reached about 520,000 of whom 452,000 were Negro slaves, and 25,000 freed men, and 40,000 white. From that year on the great prosperity of the eighteenth century in Haiti came to an abrupt close. Freed slaves revolted against white plantation owners and French officials in 1790. The freed men were defeated, and then the slaves took over, in bloody retaliation for the repressive treatment they had been enduring since slave importation started in 1518, twenty-six years after Columbus wrote of the original Haitian Indians—"So lovable, so tractable, so peaceful, are these people that I swear to your Majesties [Ferdinand and Isabel] that there is not in the world a better nation or a better land."

The slave revolt started the formation of Haiti as the first of the other American states to follow the United States to freedom. It also became the first Negro republic of the world. This era of the history of Haiti, so named from the Carib-Indian word meaning mountainous, gave the world such glittering figures as the slave-born generals Toussaint L' Ouverture, Henri Christophe, later to become King Henri I of the northern "state" of Haiti, General Jean Jacques Dessalines, and General Alexandre Pétion.

The nineteenth century also brought Christophe's rule in the north, as president, from 1807 until 1811, and as king, until his suicide with a silver bullet in 1820. It brought the presidency of Pétion in the south, with the capital at Port-au-Prince; a constitutional government based on a nation of small subsistence farmers, enjoying a new freedom. It brought Jean Pierre Boyer, who reunited Haiti after Christophe's death, then seized control of the newly liberated Spanish colony in what is now the Dominican Republic on the eastern end of the island. The Spanish-speaking section of the island revolted after Boyer's overthrow in 1843 and became the Dominican Republic.

Some of this Ed Dudley told me as we trudged over the newly reclaimed plantation lands at Léogane, and watched trains of slatsided dump cars being loaded with cane for HASCO, the Haitian-American Sugar Company, with its sugar house on the outskirts of Port-au-Prince. I reweave it later using the tested thread of facts about the other American republics which was wisely published by Frank Jamieson of the Office of Inter-Amer-

ican Affairs when even our isolationists felt that it might be useful to learn something about neighbors who wanted the democracies of the world to win the war.

But all of this history was in the very air of Léogane. It showed in the slow, not too decisive movement of the small town, whose people seemed still dubious of the solidity of the earth underfoot. It was in the rustle of frond and scraping creak of coconut cluster. It sighed through the new cane, and the towering screens of bamboo.

"Do you think Léogane will ever be what it was?" I asked.

"Not what it was," he countered. "Not unless you want to bring back the buccaneers, piracy on the Spanish Main, the old crowned heads of Europe, and a colonial system based on 100 per cent exploitation. But as a modern agricultural town, and a tight little productive community, it has a future—by modern standards of living, a better future than a past."

Then we went into the records. Malaria in the old swampland which devoured the area following its first flourishing development, ran as high as 70 to 71.6 per cent of the population. The most recent survey following drainage and reclamation showed that it was down to 22.7 per cent despite the fact that the town's dwindling population of pre-reclamation times had increased 25 per cent when people could move back on the reclaimed tract.

"We DDT'd the whole area," said Dudley. "That knocked a lot of the mosquitoes out and with the canals draining off water all the time now, there is no place for the anopheles to breed. The rate should come down much lower as the town settles down and hidden breeding spots can be detected. One thing that shows what the people think of the reclamation project is the fact that land values over the whole area have gone up 1,800 per cent. As far as health is concerned, Léogane can go as far as it wants."

Getting up at dawn can be a delightful experience in Haiti. I found it so as I breakfasted in the eerie half-light very early the next morning. My hotel was one which contrived, by using a minimum of outside walls on the first floor, to invite all nature into its tiled lounge and dining room. So I was able to catch the flora of the island asleep or just beginning to stir, as I sipped my strong, black Haitian coffee—nothing better as an eye-opener

north of New Orleans. Even the fronds of the royal palm were quiet while waiting for the dawn breeze to rouse a new day. Spanish daggers, their clusters of fine blades firm in challenging silhouette against the sky, nevertheless stood on trunks shrouded by damp and listless leafage. The flaming hibiscus, delicate coral-lita and lovely bougainvillea were curled up or drooping under the dawn dew, like so many sleepy little girls not yet crispened by the touch of hair brush, comb, and bright sun. Even the chat-chat trees, so-called in Haitian creole because their long, flat seed pods are forever rustling and clacking like so many women at market, were quiet.

But not for long. The command car and the morning breeze seemed to arrive on the same marching orders. The noises of the tropics took over. Birds, for some reason sparse in Haiti, were awake in sufficient numbers to add cheer to the morning. And the roosters and dogs, who I would have sworn crowed and howled all night only to become strangely quiet when I finally got up to put on my clothes, welcomed the car and the new day with their cacophony.

We drove out through the early stir of the capital, along the inside serrations of the fat part of the huge and battered lobster claw which is Haiti on the map. Off shore rose La Gonave island, which looks on the map as if it were in perpetual danger of being crushed by any convulsive snapping together of the thin lower part of the claw holding the cities of Jérémie, Léogane, and Jacmel, and the northern part populated by Saint-Marc, Gonaïves, Mole St. Nicolas, and Cap-Haitien.

Our route took us to Saint-Marc and Gonaïves on the coast of the Gulf of Gonaïves, across the Artibonite valley to the mountain pass at Marmelade, thence down the northern slopes to Limbe and Cap-Haitien. The distance was about two hundred miles, and the running time even for the rugged command car a minimum of seven hours. We made it in twelve.

There was a "never-never land" aspect about the Artibonite. Here were native oaks, mangoes, breadfruit, cashew, logwood, mahogany, towering over fresh plantings of cocoa, bananas, sugar cane, and a great deal of undersized mesquite. In fact, wherever the land would produce anything but mesquite, Haitians had their

little plots, their hard-packed little compounds. The houses ran to pink and buff in color, and were made of mud plastered over straw matting. Roofs were thatched or of zinc. Some window frames were gaily painted in blues and purples and very few followed the squared line. These clean little clusters of houses recalled scenes from "Snow White and the Seven Dwarfs," and at first I thought all of them tended to lean away from the wind. They all had a pronounced look of having been pushed out of line sidewise. Then it dawned on me that this must follow an architectural plan, and Pierre Louis, our driver, confirmed the supposition. With an engineering instinct of their own, the Haitians set the posts of one end-wall into the earth so that they would lean toward a vertically set wall and roof supports at the other end. Thus they achieved a lean-to tension and bracing elements to support the roofing. They looked like so many doll houses and had the air of being kept by very prim mistresses.

"Population pressure! That's it!" The phrase came out of memory. "Population pressure" was a phrase I had seen in one of the reports of the Institute's Food Supply Division. It was used to describe agricultural conditions in Haiti.

Out there I could see what was meant. As we drove down the rutty road, sometimes whooping it up to a reckless twenty miles an hour, the human and animal life of the place seemed to vie for existence with the flora, even though the Artibonite was not necessarily the most densely populated region of Haiti. There was simply no place in Haiti that was not thickly populated. Here was living evidence of the fact that Haiti has the second greatest density of population of any country in the Western Hemisphere.

The agricultural setting seemed to accentuate rather than cushion or absorb this teeming life. Here were no broad tracts leading to landscaped parks and rural mansions. Here, instead, were tight little groups of pink or buff, single-room huts, a "tournelle" or roof, held up on many unwallled poles, marking the central meeting place for every community. The houses were called "kais" (rhymes with rise) and their single rooms held large families. Here the family drinking fountain was a gourd, dipped indiscriminately in any source of water. The family diet was a sweet potato for breakfast, perhaps; for lunch some mangoes

or other fruit; for supper grain sorghum, called "petit" meal, some beans, and a little rice. There could be manioc pancakes, avocado, cassava, and coconut, with a sweet stalk of sugar cane for the children to suck. But fats and proteins would be high premium fare. Naturally, puffy farina bellies were much in evidence and the swollen abdomens also testified to widespread intestinal parasitosis.

For me, however, several things stood out prominently to more than counter-balance any pessimism or discouragement that could be inspired by the realistic factors of population pressure, soil erosion, widespread malnutrition, and disease.

First, there was the innate dignity and self-respect of the Haitian country man and woman, evident in their uncompromising correctness in glancing at or meeting strangers. Afterward I could remember meeting no really servile character in the island.

Added to this, there seemed to be an insatiable appetite for cleanliness. Another preconceived notion, nurtured by popular misconception in the United States as to what would happen to the Negro if left to his own devices, had to tumble into the discard. I saw Haitian people, it is true, who had scant schooling in hygienic use of the bathing places. But the appetite to be clean was there. Where there was anything like fresh, clean water in ditch or river or irrigation canal, they reveled in it. Where there was little water, they bathed in stagnant pools and puddles. I saw children happily going through the motions of bathing in mud-caked hog wallows.

There was an indefinable air of neatness and high value on personal property about the villages and countryside we traversed. Everything had that well-rubbed look about it. Gourds, baskets, sticks, table tops, benches, bowls, and even the posts of the *tournelles* looked as if thousands of hands had rubbed human oil and sweat into them for countless generations. I had often noticed this quality in Negroes. Give them something they prize, and they are forever passing caressing hands over it.

These were things noticed among the peasants themselves. But there were other, more concrete evidences, that the spirit of Haiti is on the reach upward and onward. Going to and returning from Cap-Haitien we went through the heart of Haiti.

Every few miles we passed airy structures, trimmed in gray-blue and white, with grounds and premises in meticulous order. These were the schools, as nicely kept rural educational centers as I had seen anywhere. Other structures which would defy criticism in many richer countries were the modest barracks of the military, known as the "garde." The soldiers, too, seemed proud of their uniforms, yet they were undisposed toward swagger or arrogance.

I noted that Haiti seemed to have one thing that many larger nations have tried to get by force, and failed—real dignity with room for friendliness, and no need whatsoever for officiousness in the garrisons and in the schools.

In the Artibonite valley the Food Supply Division was busy on a 1750-acre block of what recently had been nothing but mesquite and cactus. Here specialists were attacking the fundamental problems of drainage, irrigation, seeding, fertilization, and soil conservation—problems which had to be licked before the unpromising sector could be made to yield steadily. We saw some of the crews at work channeling and banking streams, setting in drainage canals, and throwing bulldozers into the task of bettering roads and trails. Wherever these gangs were at work there was more than ample assistance from the local people. And I felt that there would be no exaggeration involved in noting that the normally happy Haitian people seemed to be more joyful than ever as they dug ditches, tamped down fresh masonry, or wielded machete and hoe to the staccato barks and snorts of labor-saving machinery.

The food mission was erecting permanent buildings in the mesquite-ridden Artibonite, as a center of demonstration. And on La Gonave island where the poverty-stricken condition of the 25,000 residents had reached emergency levels, the mission improved trails and water supplies, established a plant and seed nursery, and then finally undertook an agricultural assistance program. Ten demonstration farms were set up with the Institute furnishing technical assistance. Farmers were formed into committees to organize community work switching on the plots which ran to an average of five or six acres. Crop diversification, soil conservation, and seeding practices were taught, and while I was in Port-au-Prince reports from La Gonave were beginning

to attract attention in the press and wherever economically minded citizens gathered.

Joquin Bazan, the tightly-wound young New Mexican business manager for the food mission showed me over the Damien Experimental and Demonstration Farm one afternoon after I had returned to Port-au-Prince, and there I was impressed by Haitian ability to make a little go a long way. Damien was also the site of the National School of Agriculture, and the students, with scarcely more than technical guidance of Institute personnel, had put into thriving production every food-bearing plant that would grow in Haiti. There were millet, corn, squash, tomatoes, leek, rice, beans, and every sort of fruit and vegetable known to those latitudes.

"We can't look it all over stem by stem in one afternoon," I finally expostulated to the enthusiastic Bazan. "I can see it is beautifully kept."

I was not being petulant. I already had the kernel of the food mission story in Haiti and there seemed little need of further detail. Simplified, the food mission was concentrating all energies on a piloting and seeding process, whereby future farmers of Haiti would have not only the natural seeds for crops with which to work, but would have thoughtful agriculturists to see that production leveled out to progressive national advantage.

What was happening, really, was the application of tested devices in Haiti which ultimately would send into limbo that pungent Haitian saying, "During the mango season we let the fire go out."

* * *

"Oh, he's just a little fella! He hasn't yet had his first attack of yaws!"

The phrase kept sticking in my mind and threatened to spoil my interview. It was one that a reporter for the Office of Inter-American Affairs had picked up from a Haitian student doctor; a version that then, and even now, poignantly described the malignant strength in Haiti of this nasty spirochete disease with its ugly resemblance to syphilis.

My interviewee was Colonel B. O. Alexander, surgeon-general

of the Haitian Garde and a former minister of public health. Sitting in his cool Port-au-Prince office, the Colonel was telling me how much the two cooperative projects for the control of yaws meant to his country.

"You've no idea the conditions we have had to face," he was saying. But he was wrong on that point. I did have an idea. Ed Dudley, present at the interview, had told me how the surgeon-general himself, a stocky ebony mass of a man, who seemed built for his khaki uniform, had had to use strong-arm methods at the opening of the yaws clinic at Moron in order to hold back the mob of treatment seekers. On that September day of 1946, the small cooperative service staff treated 803 sufferers between the hours of 11 A.M. and 4:30 P.M.

"It was like some fantastic miracle scene," said Ed. "We had no miracle to offer, of course, but you would have thought we had. Mothers by the thousands stood outside the clinic holding their sick children toward us as if we could do something for them by a wave of the hand."

This scene was distressing to all who saw it, but Colonel Alexander pointed out that from a medical point of view it was auspicious.

"We now have eleven clinics and six mobile units for the treatment and follow-up on yaws cases alone," he said. "Truly this is a splendid work. To my mind it represents the highest type of cooperation between two countries."

He went on to talk of how the yaws projects started. First came the establishment of the clinics, beginning in March, 1943. This had a very necessary training counterpart. Twenty-one Haitian physicians were sent to the United States, trained in diagnosis, methods of treatment, and follow-up. Initial clinics for the unlovely disease were set up to meet pressing demand in towns with such gracious names as Gressier, Jacmel, Saltrou, Croix des Bouquets, and Port-au-Prince. As word spread through the republic that the anti-yaws drive was on, the total of clinics increased to twenty, and then as some control was established over the disease, clinical establishments settled back to the regular number of eleven. Between March, 1943, and December, 1946, the cases handled were 244,573, and 602,095 treatments had been

given. Colonel Alexander and Dudley did not have the additional figures for 1947 totaled up accurately while I was there in the first semester of the year.

"When I speak of 'cooperation,'" Colonel Alexander was explaining, "usually I think immediately of the useful ends of cooperation. That's the reason I can be so definite about the yaws program. For instance, I don't think entirely of the fact that several hundred thousand people are now more comfortable as a result of our work. We have been watching for other effects and the government estimates that as a result of the treatments, some 200,000 Haitians, who otherwise would have been idle as well as sick, are now in productive work. That is a greatly encouraging factor in our national economy. With the eleven regular clinics at work in key locations and the mobile units treating an average of 80,000 cases a month, we feel assured that an increasingly upward gradient in numbers of people returning to useful occupations is assured. That is why I can say that this represents the highest type of cooperation between two countries and their peoples."

Since yaws dragged so heavily at the strength of Haiti and Haitians, I made a point of looking into its causes and symptoms. I learned that it was encouraged by filth, its first symptom an ankle and occasionally a knee lesion similar to the chancre of syphilis. In its secondary stage it showed as sores in the nostrils and lips, and in its tertiary, or advanced stage, it ate into the bone tissues like syphilis.

Again like syphilis, yaws would destroy the roof of the mouth, and like any venereal disease it could be infectious through direct contact.

But there the similarity of transmission ended. Yaws, they told me, was not a venereal disease contracted during the sex act.

"You'll find a lot of it back in the mountains, where there is little water," Dudley told me. "But it is so infectious that it will spread in cities too, especially where there are slum areas and negligent personal hygiene. So wherever we find yaws we know we have to give elementary instruction in hygiene."

There it was again. The old human equation. I had a flashback picture of the inland peasants I had seen merrily sluicing them-

selves with muddy ditch water, any water they might come upon. What they might get from it would be anybody's guess. Then came the mind's eye view of city folk, too tightly packed, too conditioned to the acceptance of misery to learn or care about exerting themselves to obtain clean water or to use it properly once it was obtained.

I had no feeling of national superiority about this. I knew of places right around Washington where there was an abundance of clean water, and almost too much filth for any amount of water to wash away. It was easy to imagine to what lengths some of my own careless countrymen would go in condemning town, county, and federal authorities, should anything so disgusting as yaws break out in slum communities provided with enough clean water to wash down half a dozen republics the size of Haiti. On the other hand I wondered to what extent of spotlessness the Haitian peasant might put himself, if instead of the few gourds of water he was able to pack home from the nearest stream or irrigation ditch he had potable water piped into his house at the United States daily per capita rate in gallons!

Fully aware that Haitians, like all humans, would become inclined to use good water inefficiently once its supply became a matter of course, I nevertheless had enough confidence in the appetite for cleanliness I had noted throughout the island to believe that, granted modern methods of water impounding and distribution, the Haitian people would make theirs something of an exceptionally spic and span community.

I would have called this research into one of Haiti's most difficult health problems sufficient and would have willingly submitted to the languor of the climate, but Ed Dudley was making good his promise to show me things in a hurry. In the next day or so I saw things and people enough to fill half a dozen notebooks. Public health was a going concern in Haiti.

We saw, I have said, many people, who spoke in kindly fashion of the "people-to-people" programs. But Ed Brooks of *Time* and *Life* magazines summed up everything in a better fashion than anything I could seem to enter in my notebook.

"I've always felt that there is a gap between me as a United States citizen and what my country, that is the government, is

doing," he mused. We were having cool drinks on his compact veranda overlooking Port-au-Prince. "But that isn't the case as far as these programs are concerned. I feel that I am a part of them, that we the people and the way we like things, are in them.

"Put it the other way around," he continued. "I feel that I benefit directly from the programs. Wherever I happen upon a cooperative project, there is an attitude of gratitude to me as a person. It makes me feel happily at one with my country and what she is doing!"

These, I thought, were excellent quotes upon which to leave Haiti.

BELÉM:

Her Duel Is with the Jungle

THERE was mold on Belém when I arrived and mold on her when I left. There is always mold on Belém, particularly in the rainy season. I could not help jotting down the thought that the place ought to be a paradise for penicillin producers.

The facts are that the citizens of Belém wage an unceasing and never quite conclusive battle against the mold of an Amazonian delta community where the humidity ranges only a few points between the high levels of 84 and 90 per cent the year round. To me the moldy feel of the place, greatly depressing at first, was the most unpleasant factor about living in Belém which entered my notebook.

More satisfying was the realization that this depression was of short duration, scarcely more than a passing shudder, like the shiver accompanying the first glance at snowladen countryside after a snug night, or the spasmodic shrinking from leaving a cool room for the heat waves and glare of an asphalt street. Shortly, awareness of Belém's moldiness became negligible. I came to take it as a matter of course, as I do the shut-in feeling of towering and treeless downtown New York or the sullen gloom of Washington on wet winter days.

Once the feeling of mold had gone there were ample evidences in Belém of comfortable and gracious living. Like many old cities there were numerous rundown old homes, but a goodly number of them showed continual care and here and there some glittered

with expensive but mold-resistant glazed tiles. There was the pink and yellow opera house with its white columns and bronze grilled doors, really inviting. On one fiesta evening I caught glimpses of the clubs opened up for dancing throngs and the sparkling interiors were faithful to the tradition of the European "grand salon." I spent evenings at the homes of friends, homes emphasizing cool, wide-windowed rooms and open patios, and I found that Amazonian nights, with breezes from the 180-mile wide river mouth stirring through the mango leaves, could be far less stifling than some of our sweating and gasping Atlantic seaboard evenings. Then, too, I could not tread the fine marble-hard acapú and loura wood flooring laid down in alternate walnut and yellow patterns everywhere in Belém, could not pass my hands over furniture done in priceless jacaranda (rosewood) or chocolate colored sucupira without feeling that there is such a thing as pleasing old age in a city. Let the twenty-dollar-a-day resort town gleam with chrome and leatherette! A city like Belém, or Charleston, or New Orleans, where fine old leather, copper, brass, and wood is at hand, may be a little worn at the edges, and a little scarred on the outside surfaces, but once you settle in, it becomes as comfortable as a good old shoe.

Getting to feel at home in Belém was such a rapid process with me that I was soon eager to widen my scope and proceed upriver to Manáos, Boa Vista, Itaituba, Guajara-Mirim, and all those other Amazonian towns where I knew Institute men to be at work. Fat chance! Dr. G. C. Andrade, of the Amazonian health program and Lou Hummel, chief engineer, laughed me out of countenance.

Did I know that if I superimposed a map of the United States on an equal scale map of Brazil, with Belém over Washington, the outlines of the Amazon basin would reach westward to somewhere between Denver and Salt Lake City, north into Canada, and south as far as Dallas, Texas? Of course I knew something of the sort vaguely, but hadn't thought of it. Also, I was counting on air transportation. Field operators got into the back country, didn't they?

"Yeah," said Lou, "when we know two or three weeks in ad-

vance where they are going. Dr. Andrade has a priority on two seats a week on the airline and with that he has to take care of the travel of sixty-five doctors, some engineers and nurses and . . .”

“Visiting firemen?” I suggested.

“Yep,” he grinned. “But seriously, we’ll get you up river as far as we can by boat and show you all around Belém. I think that will give you a good idea of some of the things we have to do to keep the Amazonian health program going.”

In short order I found myself out on the Amazon itself.

“Course West by Sou’west, making twelve knots on a four knot tide, light breeze east nordeast, and breakfast cooking in the galley.”

I was showing off my seamanship to Dr. Victor A. Sutter, public health consultant for the Amazon program. He was only politely amused. He had just rolled out of his hammock after a chilly night on the upper deck of the motor launch *Paraguassu*, sister ship to the *Presidente Roosevelt* on which I had cruised the headwaters of the Amazon a year past. Even the mention of breakfast drew nothing but a wry grin from this slight, sun-browned man with the hands of an artist and the tired dark eyes of the perpetual student. From previous experience he knew that breakfast aboard the medical launches probably would warm neither heart nor belly. It was likely to be a dish of cold cereal and a chunk of bread with a platter of farina meal on the side. Forewarned by the doctor himself as to these galley customs I had gone below as soon as I heard the apprentice boy, who served as chef, fussing over the crude oil stove, and I got my cereal hot. With hot coffee and in the warmth of the combined galley and engine room it tasted good—at dawn, but an hour later, set out in cold blobs on the main cabin table it was unappetizing in the extreme. Since our cook showed neither knowledge of the possibility of warming over the stuff nor intent to get his stove to cooking again, I could sympathize with Dr. Sutter, and Nurses Ella Hasenjaeger and Sumaia Cuti and their rather jaundiced attitude toward breakfast at dawn on the bosom of the lower Amazon. But there were bananas, oranges, pineapple, coffee and cocoa, as well as farina and flabby cereal, and soon everybody,

sparked by the ebullient Miss Hasenjaeger, was in excellent spirits.

We were on the way to Abaetetuba, cruising along sometimes within arms-length of the ever-crowding jungle, at other times so far out in the channel that the shoreline became a green blur. Dr. Oswaldo Silva, director of the Amazon program, and Lou Hummel had told me that the Amazon basin was as changeable as the chameleon whose generally serpentine body outline it so closely resembled, and this I could well believe. But what I saw of it on the 35-mile cruise to Abaetetuba was more than reminiscent of my short jungle jaunt between Iquitos and Tamshiyacu more than two thousand miles up river. True, close to Belém, there were occasional broad sweeps of plantations with trim red or yellow roof tiling and white frame or masonry walls showing up on the backdrop of monotonous green. And the river itself was cheerfully populated with graceful sailing craft of Portuguese design. There was more bright paint on more of the dugouts, and conventional cotton clothing was in evidence on more people. But, as the *Paraguassu* nosed closer to the banks, or that rim where trees and foliage grew straight out of the river itself, the sense of jungle-pressure was the same as it had been in Iquitos. If anything, it was accentuated down river by the local custom of hiding clearings and houses on hummocks well back from the river, evidences of human life only dimly glimpsed through the tunnels in the smother of vegetation cut just wide enough to lay palm trunks end to end in precarious pathways to open water.

Of the sailing craft I made particular notes, helped along from time to time by Ella's zestful appreciation of their beauty. Here we had the Portuguese "canoas" and "barcos" reminiscent of the feluccas of the Nile. Their sails were lateen-rigged, their hulls curved low and gracefully over the waterline, and they were a joyful riot of crimson, blue, green, white, gilt, and pastel colors. We saw many with rakishly set sails in colors of coral, yellow, blue, and blood red. There seemed to be a general pattern for hull paint, making consistent use of blue, black, green, red, and white. The living quarters consisted of a low, hooped canopy, open fore and aft like an unfinished Quonset hut, and extending from abaft the cargo hold to a sliver of decking at the poop. And the names, borrowed heavily from the roster of saints, were

painted in with bold flourishes along the sides of these cocoons, which housed sleeping pallets, open hearths, human beings, and livestock with indiscrimination.

These were craft that had made Portuguese sailormen of an earlier day famous. They seemed to have departed little from the basic designs of the early Phoenicians, of the smaller, faster craft of Magellan's day and the era of Columbus. I could see no reason why they should. They were too utterly beautiful, too well found from a sailor's point of view, with their smartly trimmed rudders sloping forward as well as downward to form close union with keel, to seem needy of change. Jerry Pirtle told me that these craft consistently made the long run from Belém and Natal to Portugal in sixteen days or less. Watching them scud along up the Amazon, and with any kind of a breeze offer keen competition to the Diesel-powered *Paraguassu*, I could well appreciate what they could do when they picked up the spanking trade winds of the South Atlantic.

My nautical observations of the moment ended with recording the fact that the "caboclos" of the lower Brazilian Amazon, unlike the Indian river men of Peru, sat in the stern or just abaft the beam of their bobbing pink, blue, green, and red canoes to do their paddling. This was a short chopping motion which carried the paddle straight down and out of the water in an inverse scooping movement, just far enough to wet about two-thirds of the blade. Lou Hummel, who had spent nights and days traveling in this fashion, later told me that the caboclos could keep this up all day long without missing a stroke. And of course I saw that most of the sailing vessels were equipped with varying sizes of tin horns. Foghorns? No. These were "Chama Ventos" (wind callers) with which skippers thereabouts were wont to "blow up the wind."

We raised Abaetetuba at mid-morning, having bucked an ebb tide the last two hours of our cruise. We made fast at about half-tide, the huge pilings that held up the docks towering above our superstructure. Abaetetuba's waterfront street, with its open-front stores displaying everything from canned goods to calico prints, alligator hides to freshly hung meat, struck us with carnival impact as we scrambled up the gangplank to dockside

level. Here was a typical, if not "the" typical Amazonian town, offering in wide-open fashion everything it got from the river back to the folk of the river. It seemed like a false-front town, with no depth to its grasp on solid ground beyond . . . a mere tattered fringe of civilization left to bleach on a sandspit by the receding tide. I remarked on this to Dr. Sutter.

"Yes," he said, "that is true of most Amazonian towns. They spread out along the river banks. That is because people have to have water, and particularly in the Amazon, with its lack of roads and vehicular transportation, it is necessary to live as close as possible to the water. But you will see how this probably will be changed, at least to some extent."

We went directly away from the river for several thickly populated blocks. I had not thought there would be that much penetration inland. Then we came to a wide plaza on ground safe from floods, where construction was proceeding on new flanking buildings. Here was the SESP * health center, and beyond that the SESP water supply plant. Here was the waterfront's future competitor as center of Abaetetuba's social structure. It seemed to me that I could sense the first effects of this move inland in freedom from the rotting smells of the river, a diminution of the assaults of flies, gnats, and other insects.

"It is only a beginning here," Dr. Sutter explained. "Because this is a small and not very rich community. But in Santarém, for example, the engineers put a water supply station back on a hill so as to supply the town by gravity feed, and there has been quite a real estate movement in that direction." I learned from the engineers later that eventually still higher ground would have to be sought in Santarém, since the population move had already reached back and behind the current water station. The engineering trick was to pump to high ground from the river, purify the water and then let it flow back through germ-free piping to serve an ever-increasing number of homes. This was civilization again, with its alert methods of protecting human beings after they themselves had fouled up the bounties of nature. In the Amazon, as elsewhere, eventually the best way of obtaining good water

* SESP—Serviço Especial de Saúde Pública—is the Brazilian contraction for the cooperative "Servicio."

would be to retreat from places where nature provided it with greatest abundance.

"Nothing here but work! There's something wrong about that. I mean just work, work, work, isn't the answer to everything. It seems to me . . ."

I made some facetious remark about there being few playmates but the alligators for jungle fun-seekers, but I was listening carefully. Big Ella Hasenjaeger with the forthright manner and infectious chuckle had her mind set on an idea, and when Ella got something fixed in her mind the neighborhood was likely to hear about it. Like me, she was a visitor to the Amazonian health program. We had finished our day in Abaetetuba and, back on the *Paraguassu*, were reviewing our impressions.

"I don't see why SESP can't make life more livable for their doctors," Ella was saying. "It's not right for a young man like that to sink into the feeling that there is nothing ahead of him but work and more work. There should be some recreational facilities, some way that he can escape the daily grind from time to time."

The innocent cause of all this had been Dr. Aloysio S. de Almeida, slender young medico in charge of the Abaetetuba center. As a matter of fact, he had looked somewhat off his feed as he showed us around the town and entertained us at dinner. When Ella wanted to know what he did in his spare time, in the precise English of the University of Michigan's training center for Institute and other scholarship men, he had replied simply:

"But this is a good place to work only!"

It wouldn't go down with "Nurse" as we were all soon calling the vitality-exuding, fun-loving Ella.

"It's not right," she kept repeating to me, and though I teased her about wearing us all out with her own excessive energy—she really was a dynamo—secretly I agreed. For I knew that with Ella, recreation could never be had at the expense of a working schedule. It would always be some part of the day purposefully set aside for the therapeutic replenishment of mind and nerve and body. This might be exercise, theater going, card playing, dancing, or just plain fishing. Whatever it was, to suit Nurse Ella's sense of the fitting, it would have to be productive of some whole-

some fun making and ability to put the cares of the day aside.

Finally, I agreed with Nurse soberly and convincingly enough so that we could proceed to examination of some of the other reportage of the day. I honestly felt that the next step the Institute and SESP should take, especially in the Amazon, was examination of salary, recreational, vacation, and home-life arrangements which would assure their representatives in this monotonous climate a reasonably full life. For this place, like Iquitos, if to a lesser degree, had all the ingredients for cafard, and anything resembling the Hasenjaeger ideas, which would promote balanced living in the men and women serving the Amazonian health project, seemed eminently worthwhile.

But I did not share her immediate worry about our young Abactetuba medico and his liverish look. He was a doctor, had a good sense of humor expressed in small, quiet ways, and there was another element in his life which made me feel he would be properly adjusted and cared for. For the moment I put thought of this factor aside.

We went through Dr. Almeida's day. He and another doctor, three visitadoras, a male nurse, a sanitary guarda or inspector, a laboratory technician and three clerks handled the health center with its daily average of fifty patients. They followed up through the town (population 4,000) checking up on food establishments, bars, restaurants, barber shops, school, and household water supply.

While we were there Dr. Almeida had just arrived at the conclusion that a long campaign against some rather erratic midwives of the town had begun to produce results in better prenatal attendance at the center. His figures showed that intestinal parasites were the chief marauders against health in Abactetuba, outside of the usual Amazon percentages in venereal disease and yaws. His percentages in persons examined in the age brackets of one to twenty years were 29.0 for hookworm, 89.5 roundworm and 78.0 whipworm. Amoeba percentages ran 4.9 and 8.3 under the histolytic and lamblia classifications.

"And, of course, there are all sorts of other minor intestinal vermiform manifestations," he said.

But he was encouraged.

"Now we are giving prenatal care to at least fifty per cent of the pregnant women, and that means our visitadoras have a chance to follow up instructions and suggestions as to diet and good use of water," he said. "They teach the use of vegetables. When the center started there was not one single family vegetable garden in Abaetetuba. Now there are more than a hundred."

The young doctor's lean, at the time rather sallow face, crinkled into a smile.

"At first the visitadoras did not know how to take it when the children started calling them vitamineras [vitaminizers]," he chuckled. "They were just recently new in their nurses' uniforms and they thought the people's own name for them was, how do you say, not becoming. But we told them it was a good name, a fine name for a visiting nurse. When the children learn to associate good health with good vegetables and good cooking that is a big thing in a place like this."

That afternoon we went to school with Dr. Almeida and found a vociferous little democracy at work in the form of a Children's Health Club, sponsored and encouraged by SESP. I very carefully set up a press conference with the president, Expedita Maria Cezane, 15, and the other officers of the club. I was informed they had 407 members, were growing constantly, and had about 10,000 cruzeiros (with the cruzeiro running then at 18.50 to the dollar) in their treasury. Miss Cezane had just been elected and said her desire was for a more vigorous prosecution of the gardening campaign, with more scope in the growing of vegetables. Then they lined up the children in the school hall and patio for afternoon "merenda" or lunch, a snack featuring vegetable soup, bread, and chocolate, all prepared in the school soup kitchen, also run by the children.

But food was not all that the Abaetetuba children concerned themselves with in the Health Club. A Brazilian law requires that children going to school or theater or other meeting place must be shod. Natural law in Amazonian towns is likely to make hookworm the unfailing penalty for going barefoot. Later I was to see many children in Brazil, wearing only one shoe, the other having been loaned out to brother or cousin or friend, in impish but widely accepted circumvention of the written law.

Not so in Abaetetuba! The "vitamineras," hence the children, had come to understand why the shoe law had been written in the first place. The Children's Health Club had taken it upon itself to see that all its members, and school children generally, were shod on both feet. They were also helping out in the matter of clothes, milk for babies, birthday parties, and things of the sort dearer to the heart of a poor child, perhaps, than to the more fortunate. Their school, by club regulation, was kept well, they themselves in their blue and white pinafores and jumpers were so prim they were almost prissy. But their whole establishment was as agreeably clean as a Swiss front yard.

We went on back to the cool, high-ceilinged health center and discussed such things as water supply, health center, and syphilis.

"You run into many human quirks, reservations, outright deceptions, in an anti-syphilis campaign," said Dr. Almeida.

"That seems natural," I interjected. "Venereal diseases imply the violation of moral code. In that you've got the woman angle. I think you've done wonders to get women to come to these centers and submit to examination, particularly before marriage. I understand they are pretty cooperative about it."

"Yes," said Sutter, "little by little they become more cooperative . . . the women. But we have to preach constantly that the physical tragedy of positive syphilis is much greater than the social tragedy of a positive Wassermann."

It was at dinner that night that my Chicago-born nurse with a master's degree from Columbia, twelve years in Essex County, New Jersey, and the abiding determination to see that everybody in her vicinity was in good shape, got to chiding Dr. Almeida about his worn look.

"I should think you'd get out on the river, get 'em to give you a boat or a launch, so you can take your wife and get away from the center for a while every day or so," she said. Her concern was that of a large-hearted, abundantly healthy soul who cannot bear to see others even slightly under par.

"What do you do? Don't you have any relaxing sports, or games or something?"

"We play pis-paf, búraca!" said Almeida. He chuckled. Plainly he was amused by Ella's concern over his admitted seediness. He

slyly insinuated that these card games were just about all a busy Amazonian doctor cared to take on by way of spare time amusement.

"Oh, yes, we play another game called 'drop in,' " he boasted. "That one we learned in, how do you say, Stateside." Mrs. Almeida, a wisp of a blond girl from Bahia, joined in explanation of the games. She, too, had been in the United States, spoke excitedly of her sojourn there, and with more than a hint of optimism about her husband's career in the Amazon.

"It is good, this work," she said. "A little dull, yes. But we are young. We will have good times."

Her words were perhaps cryptic but her manner was not. Clearly here was a young woman who had "the hand" for making things around her seem more tolerable. I had noticed how, with brief warning, she had managed to serve a delicious and well-balanced dinner for her family and three guests in a town which offered little encouragement to sudden departure from the merest staples.

"Some things we grow ourselves," she said of the vegetables. "They are not too wonderful, but all right for Abaetetuba, yes?"

Then her solid frame house, built on pilings a foot or so above the ground, gadgetless, and furnished in the immovable hardwood of the region, seemed too heavy a structure for such a slight woman. But she had managed to give it some air of sprightliness mixed with a degree of solid comfort. I could see why tired Dr. Almeida could find easy sanctuary there, and smile at suggestions that he seek toning up elsewhere.

Yes, Mrs. Almeida had the hand to make a home in the jungle. I had flashback pictures of my own mother, when I was a little boy, moving about our early plantation home at Cape Cruz, Cuba, a garden trowel in one hand, a short whisk broom or palmleaf fan always ready in the other to bat down scorpion or tarantula. We lived in a bungalow built on six-foot pilings to discourage land crabs, snakes, and wood rats, and until the "batey" or sugarhouse grounds pushed the foliage back, the jungle was our front and backyard. But Mother knew how to overcome things like that. When I left the place as a boy of about twelve I took away an impression not only of a pleasant wide-lawned

bungalow, with deep verandas and flowering shrubs, but of a home where books and music and lively topical conversation—those things that make for gracious living anywhere—were never forgotten.

There seemed no point in trying to explain all this as I silently refused that night to join Nurse Ella in worry about Dr. Almeida. I felt we were leaving behind us someone who would worry little and accomplish more for our young doctor than anybody in or outside the Institute.

This had nothing whatsoever to do with the conclusion that doctors, engineers, nurses, and auxiliaries representing the co-operative health services in the Amazon basin deserved the best salary, living allowance, and living conditions that could be procured for them.

Before I left Belém I checked the quarterly consular reports and noted that the whole Amazon valley was drifting back to painful reality following a wartime boom in rubber and other jungle products. Once again it was becoming apparent that if the Amazon was ever to be exploited to the full it would be by small farmers, little business men and uncomplaining professionals who would be willing to live out Amazonian progress the hard way and the slow way. Certainly the people I talked to in Belém were scornful of booms. The consular reports indicated, meanwhile, that in the valley generally and Belém particularly, government financing had become precarious. There was inflation and the cost of living was going up. Meat was scarce with fazenda owners withholding stock from officially priced markets in favor of the black market. Manioc production was off. There had been floods on Marajó Island, the food-producing block of land in the mouth of the Amazon. Building was not keeping up with the increase in population. The babassu market in Piauí and Maranhão was in confusion. Pará exports had fallen off 57.9 per cent as against the same period in 1946. The valley was facing economic crisis.

In all this gloomy reporting there was a fact that made me feel that Belém, old and worn as she might be, nevertheless had a future; that the Amazon valley which had for centuries defied the schemes of would-be exploiters, one day would become tractable, productive of a decent living for men of reasonable appetite.

It was the Brazilian government *Plano da Valorização da Amazonia* (Amazonian Development Plan). Lou Hummel told me this would pour three per cent of federal revenue, plus three per cent of the income of the states and territories of the region, into Amazon valley development for the next twenty years. Moreover, all the municipalities of the gigantic area would be required under this constitutional plan to allocate three per cent of their revenues to the same great project. To me, with just enough Amazonian experience to be more than respectful of its distances and natural deterrents, this plan seemed more sound than spectacular. It followed the precept of investment by one generation in the future of another, a principle not so appetizing to the adventurer perhaps, but infinitely more pleasingly attuned to the psychological bases of the "pater familias" with whom Brazil is so richly populated.

It was a comfortable note upon which to close my reportage on old Belém. I felt that the old city and I had established secret rapport. We knew that it was a good thing to have navigable access to a vast and semi-undeveloped hinterland at the backdoor. And the old city, in her wisdom, whispered to me that it was not necessarily a good thing to have all the inland riches pass through in one vast flood—that it was better to work, and wait, and take what was sure to come on a slower, more lasting basis.

Then there was the good feeling of knowing that Brazilian and United States Institute men were working in the valley with the profit motive buried under the alternate layers of complete disillusionment with Amazonian "get-rich-quick" schemes, and the warm folds of community service.

There was a sense of worthwhile experience in having associated with such men as Doctors Silva, Andrade, and Sutter—as they preached that the "tragedy of positive syphilis" was infinitely worse than the woe of the positive Wassermann, up and down this tremendous domain. For Dr. Almeida and his wife there was a particular feeling of warmth, because they looked as though they ought to be country-clubbing, yet were able to describe Abaetetuba as a "good place," not a "bad place" to work.

Finally there were Dr. Robert Mein of the SESP hospital in Belém and Mrs. Mein—Bob pent-up or expressive, whichever

way his mood struck, always as deeply concerned about the public health and doctoring programs of the Amazon, what he could not do as well as what he could do, as if he were public health officer of his own home town community; dark-eyed, lissome, lovely Kay, looking and acting always like the kind of ministering angel a really sick man would like to have at his bedside.

With these people in the Amazon, I did not wonder that old Belém smiled and joked with me about herself, as I prepared to leave. She did just that. I was in the barber chair, getting slicked up for Rio, when something made me think of the bold and colorful face old Belém put on her waterfront, with barco sails and hulls of many tints, the shimmering expanses of blue water, the glitter of tile on domed cathedral.

"I may be moldy," the old city seemed to say, "but I have my dazzling moments. You'll find I balance out pretty well for looks and personality among cities of my own age."

To the barber's dismay I nodded vigorously. My eyes had been absently studying the barber pole. It was more than red, white, and blue. It was topped with black, stockinged with orange, and its spiral stripes included red, white, blue, violet, orange, and green!

"Old lady," I thought, and I was mentally whispering behind my hand to the old city, "you don't just balance out. At times you burgeon! You're not only dazzling at times. At times, old dear, you're positively gaudy!"

THE RIO DOCE:

Sweet Water, Minerals, Riches—or Disease?

WHAT to do about describing Rio de Janeiro? It was a question to which I never found an adequate answer.

We came in at 7 A.M. after a nightlong flight straight across the vast Brazilian bulge. That in itself was an experience to make the sight of Rio welcome. I could not recall, during the whole night of fitful sleep and much peering groundward, having seen a single light. It was like flying off into nowhere. That night aloft I got not even the dubious comfort of a glimpsed river, or what reassurance I might conjure out of the jungle green.

So when we angled down over Rio on a line from Petropolis, perched up in the mountainous inland, there was considerable stir aboardship. Everybody craned. And everybody was destined to a brief disappointment. For Rio was still tightly tucked under a snug, white fog blanket, though the sun was dazzling enough above. The next thing we knew we seemed to have hooked a wing tip on the figure of Christ atop the Corcovado in order to pinwheel lazily around and around the harbor and city. Finally Rio began to step out of her morning sheetings. Alternately she was icy white as a vestal virgin or rosy as a freshly bussed widow, depending on which way the sun sliced into the shadows of those illogical mountains which gave a theatrical tone to the whole natural show.

I called the mountains, for that matter Rio itself, scenically "illogical" because, at first blush, things in the panorama below

seemed to represent what they were not. Here were giant stud-dings of mountain formation sticking out of the sea in suggestion of volcanic upheaval. Yet I knew this part of the Brazilian coast, at least, was not volcanic or seismic. In and around these mountains flowed rivers of cherry red, terra cotta, burnt orange, and orchid streams, from the air startlingly like the flow of molten lava. But it was not lava licking at the feet of Rio's many mountains. It was humanity gone crustacean under myriad shades of shell-like roofing. There were frequent strips of blue, of course, and they provided the coefficient of stability which forced me to admit that what I was seeing must be real. For these strips, unmistakably, were fingers of the sea reaching gently inland to cool and temper a color scheme that tended to run amok.

We circled Corcovado again and passing over the downtown airport which juts into the harbor like a great esplanade, slid down the last frayed wisps of a rapidly departing ground mist and into the bigger airport across the bay. Then we were in a launch back-tracking across the harbor.

I was given little time to see Rio, much less try to describe the city adequately.

"In the Rio Doce you'll see what we mean by going into a place with all fists flying."

The speaker was Dr. Eugene Campbell, director for the Institute of Inter-American Affairs in Brazil. With him was John Faulkner, chief engineer in Brazil for the Institute and SESP, and an Army veteran with two years service in Europe, his name one I had become familiar with in the faraway Amazon. In one of those downtown panoramic corner offices, where the whole lush atmosphere of Rio seemed to pour in the window and invite us to forego all forms of work, they had me taking notes before a big project map of the Rio Doce Valley.

I lost track of what they were saying for the moment while trying to transpose the charted engineering symbols into something like narrative sense. Before me was what looked like a big inverted V outlined on the map of Brazil by pins as varicolored as Brazilian barber poles. At the apex of this V was a large circle bearing the name of the town Governador Valadares. This was the rail shipping point for the Itabira iron mines, one of the rich-

est deposits of high-grade iron ore in the world. Sloping south-westward or 45 degrees downward on the map, the row of pins reached almost to Belo-Horizonte, capital of the state of Minas Geraes. And on our right hand as we faced the map, or south-eastward on an equally sharp geographical line, the other leg of the inverted V was placed on Victoria, modern capital of the state of Espirito Santo and a thriving port for products of the valley, about an hour and thirty minutes of fast flight up the Atlantic coast northeast from Rio.

"It's a lot different from the valley you have just seen," John Faulkner was saying. He was one of those persons who can verbally pace, indent, and give color relief to a flow of professional information effectively enough to keep a layman's interest from sagging.

"Up in the Amazon you had that big ol' river and jungle stretching thousands of miles back inland with its trees and vines and mudbanks to drive you crazy with monotony. You had transportation largely limited to river boat and canoe, and except for the cities of Manáos and Belém, one thousand miles apart, you had the population scattered in lonely river-edge villages."

He took a breath. He moved a step nearer the map, and with brown eyes alight in a face just this side of being too much like a collar advertisement, again started to talk.

"But in the Rio Doce Valley, and that means Sweet Water Valley, you've got an entirely different thing." With a wide sweep of his arm he sent the rubber end of his pencil traveling up one side and down the other of the V.

"Here you have several hundred thousand people living in a narrow valley, pressed in by mountain ranges sometimes right down to the banks of the river.

"It is only about four hundred miles long, but it is the watershed of an exceedingly important area to Brazil. We found out it was important to us during the war. Right up in here is where we got tons of mica, iron ore, quartz, not to mention bauxite, asbestos, semiprecious stones, coffee, cacao, and hard woods."

Then came a typical Faulkner change of pace.

"Did you ever realize," he demanded, "that right up near Governador Valadares, Brazil, in the state of Minas Geraes, are

some of the world's richest reserves of iron? They say Brazil has twenty-five percent of the world's known supply of iron ore, and most of it is in this region."

I had not realized it and found the assertion somewhat startling. Then Faulkner was back on an even stride. Because the valley was very narrow, he pointed out, its population was concentrated in numerous towns and villages along the river edge and main railroad line. Contrasting with Amazon settlements these were closely packed together, so much so, as Faulkner put it, that "a man could live in two or three of them daily."

The public health engineering problems therefore were similar to those presented by any series of valley towns, like those of the Susquehanna or Monongahela. Later I was to note that Brazilian engineers and doctors liked to think of the Rio Doce as similar to the Tennessee Valley Authority—a tropical TVA.

"So many people live so close together in the Rio Doce that we had to go in with everything we had."

This was Dr. Campbell speaking. I noticed that the room grew quiet. A slight man with a fine, almost delicately boned face, candid blue eyes and a somewhat tiptilted nose, the Institute director for Brazil gave the general impression of youthfulness. But he had that quality of patience and determination which made physical size unimportant.

"I mean," he continued, "that we have had to integrate and dovetail all our health services in the Rio Doce. You can see how easily communicable disease could spread from one end of the valley to the other. When we went in rates were pretty high in such things as typhoid, tuberculosis, the dysenteries, and—of course—malaria. Surveys showed seven out of ten people up there were infected with worms.

"It meant that we had to pull together into one concerted drive, the establishment of good water systems, sewage disposal, construction and operation of health centers, nurse and sanitary inspector training, health education, and the control of tuberculosis, intestinal parasitosis, venereal disease, and malaria.

"In other words, when SESP was asked to go into the Rio Doce it went into a place where bad health conditions hurt not only Brazil but the war effort. The railroad was being rehabili-

tated to haul out the mica, iron ore, quartz crystal, hardwoods, bauxite, and other things we needed. For thirty years or more it had been trying to open up the valley, but had always been slowed down by malaria. SESP pretty quickly cleaned up the malaria, but that would have helped very little if we had not carried on a combined operation against the other diseases.

"I think you'll find tangible evidences in the Rio Doce of how teamwork can clean up a valley," he concluded. "When can you leave?"

Something about the enthusiasm of these men made me forget to look wistfully out the window on lovely, seductive Rio de Janeiro, a tendency strong in me before they had parked me in front of the up country map.

"Right away," I said. That was all they were waiting for.

* * *

Wham!

Our undergear hit a hard spot of baked clay sticking up between the two ruts of the road. I winced and went back to sleepy contemplation of the countryside.

My companion was Clifton Bovée (pronounced bo-vay), program engineer of the Rio Doce health program. Our vehicle was a somewhat battered popular price sedan. We had cut across country from cool and lovely Victoria so that I could get an idea of the feeder valleys and general countryside behind the railroad and river. By this time my tired lids were at half-staff and the slits of my eyes were caked with moistened dust but there was too much to see to permit sleep of any duration.

"It will get cooler and not so dusty as we go up over the ridge," said Bovée.

The driver began to shift down into second gear frequently. It was getting cooler. We climbed up past the Cachoeira da Fumos (Smoke Fall) which did look like a wisp of smoke crawling up the bare rock, and after a time began to drop down into Canaan Valley, a valley truly as promising as the connotations of its biblical name.

Here German and Italian immigrants of some past era had settled, and their agricultural practices were reminiscent to me of

the Alto Adige and the Tyrol. There was clever use of the water-wheel, something a little more suggestive of personal pride, or so it seemed to me, in the care of livestock, grain patch, or poultry run, than was common in easy tropical climes. The people, too, were novel types for this subtropical setting, where sugar cane and mango, palm, guava, and wild plum were not to be supplanted by sugar maple, apple, peach, or pear. I had grown used to chuckling over children of chocolate, brown, or olive hue, their large dark eyes reflecting their volatile thought, like fragments of shiny pit coal held to bright sunlight. Here in the valley of Canaan and for that matter all through the Rio Doce, flaxen-haired children mingled with the others, their china blue eyes, fair or freckled skins giving a startling April Fool quality to the Portuguese words that tumbled from shell pink lips.

Finally, we raised Colatina, inspected the waterworks and after a brief night at SESP headquarters made lively by a prolonged religious ceremony, designed, I thought, to give full rein to some individualistic sopranos, we were on a train for Aimorés.

In spite of physical weariness that dulled my appetite for the busy, sometimes raw little towns that had mushroomed up along the meter-gauge track, and dimmed appreciation of the beautiful sweeps of the wide, sweet water river from which the valley got its name, my notebook was filling up. Cliff Bovée was one of those young fellows with a slow, easy smile, and ability to lounge on the hardest kind of seat, who made questioning a pleasure, and who made me forget that he, as well as I, could get tired. The Rio Doce "winter" (June, July, and August) had just begun, and it was cool enough morning and evening for leather jackets over our field khaki. At Colatina we had boarded a railway passenger coach, converted to what was known up and down the narrow-gauge line as the "Sanitary Car." It was our headquarters for the next two days. Early in our association aboard the Sanitary Car I noticed that Cliff's jacket, flung on his berth, had the insignia of a Himalayan hump flier sewn into the inside back lining. This was Old Glory, beyond mistake, with additional information in Chinese characters as to his mission and credentials.

Yes, Bovée said negligently, he had done his time overseas, had

been out in Brazil since shortly after the war ended in the Far East. He liked it . . . thought the job was shaping up all right, thought it should go on until the valley really was on its feet from a health point of view.

Cliff was an informative, though a not too enthusiastic talker. That railroad—Estrado-Ferro de Victoria-Minas, or EFVM—had been a construction pain in the neck ever since it was started by a British firm 30 years before World War II. Completed finally, it shaped its course from Victoria to the Rio Doce, along that waterway to Governador Valadares, thence southwest through Baguari, Ipatinga, and Desembarcadero Drummond to Belo-Horizonte. Early in its career the jungle, wild Indians, and malaria had taken heavy toll. Malaria, along with the intestinal diseases encouraged by polluted water and improper sewage disposal, continued depredations along the line until the need for steady exportation of the mineral and agricultural materials of those parts of the states of Espirito Santo and Minas Geraes served by the railroad became urgent. United States contractors took over rehabilitation of the railroad under arrangements of the Brazilian government and Export-Import Bank, and SESP was directed to step in and clean up the valley.

Cliff slapped at a bare forearm. We had the window glass and screens of the sanitary car down, the better to photograph the countryside, and a red-hot splinter from the wood burning locomotive had stung him.

"If that had been a mosquito would you worry?" I asked. Several of them had plugged me at Colatina the night before, and I was not completely sanguine about this valley.

"Not much. There hasn't been any malaria up here for some time. But this railroad sure is hard on clothes if you don't keep the windows closed."

We jogged through Itapina, and Mascarenhas, at a rattling, pounding twenty-mile an hour gait, with the engine whistle and its echo yodeling a frenzied duet up and down the valley. When two locomotives were within hearing distance of each other the din was terrific. Each engineer on the line had his own signal, most of them desperately prolonged blasts heralded and punc-

tuated by gasping *appoggiaturas*. The net result was to wonder just which of the engines would be first to end it all by plunging to death on the rocks of the river below.

Between the delirious bursts we talked. Cliff was telling me about the Rio Doce and why there was a vast difference between its problems and that of the Amazon. I could see the topographical differences myself. The Rio Doce was a relatively swift stream, free of tidewater. It burred down through mountain hummocks and blunt-ended stone studs like those of Rio de Janeiro and vicinity. Some of these separate protuberances would be domed on top, glazed on one side and decently clothed with rich tropical verdure on the other. Others furnished good pasturage clear to the top on one side, but offered a foothold only for cactus and vine on the farther slope. There was an absence of cragginess about them which gave them the general effect of paint blobs in a child's sketch book.

"Yeah," Cliff agreed, "they are queer mountains. They say, though, that they offer a paradise to geologists. You see, they are not volcanic. The rock is of igneous origin. Primary formations are basaltic, gneiss and granitic. They are bubbles of molten rock squeezed up in these inverted chocolate drop formations and were left that way as the earth's crust cooled. I forget how long ago that was."

The whole Rio Doce scene was in great contrast to the flat, jungle-burdened fluvial terrain of the overpoweringly tremendous Amazon basin. The Rio Doce was a perfectly normal river, perhaps a half-mile wide in places, pursuing its rippling way down through the mica, iron, and other mineral-producing states of Minas Geraes (General Mines) and Espirito Santo (Holy Spirit). Like any self-respecting mountain stream, it was not navigable to ocean ships though it would float shallow draft vessels as far upstream as Colatina. Valley activity was divided between mining and agriculture, with a heavy accent on logging. We passed carload after carload of fine furniture *jacaranda*, and dense, non-buoyant *peroba* for the making of flooring, joists, beams, frames, and stringers. The rosewood (*jacaranda*) ran eight inches up to about two feet across the butt, splendid timber indeed. But the *peroba* for all its lowlier uses was by far the more impressive in

the raw. Blond in texture, the logs we saw ran as thick as four feet across the butt end, made cars and men who had to handle them groan with strain. There were other woods in the Rio Doce, rivaling the finest of more inaccessible Amazon areas. There were cedar, sucupira, mahogany, and a host of others.

The mineral for which the valley was famous was mica. However, in Victoria the view across the bay from Cliff's mountainside perch was that of a huge ore dump—loading point for vessels from the United States, England, and Holland, which warped in to take on ore from Itabira mountain—that great rock consisting of 65 to 70 per cent high grade iron. There were aquamarines, and other semiprecious stones all through the region. In the Rio Doce, and in Brazil generally, I found that it was no novelty to have someone join a group and casually announce possession of a few fine stones, picked up "in the valley" and available at a few reasonable thousands.

The agriculture ran to coffee, cattle, cane, and local consumption produce. As the third largest coffee exporting port in Brazil, Victoria handled about one million bags of sixty kilograms each, every year. But I was to learn later that thoughtful Brazilian agriculturists were beginning to regard the tremendous march of coffee planting southward and westward in Brazil as auguring the curse of one crop economy, and it was distressingly easy to recall that where King Cotton had once reigned over great areas of our own south there had followed a long and barren period with little or no economic productivity to act as heir apparent. While I was in the Rio Doce Valley this Brazilian foresight had found expression in surveys to determine the practicability of throwing some of its better land into cocoa and other export crops.

Finally, unlike the Amazon, the transportation lifeline of the Rio Doce Valley was not the river, but the railroad. And population was more compact, as was the geographical area itself—midget-sized in comparison to the great Amazonian wilderness.

"So what we did here was to start by protecting the workers on the railroad," Cliff was saying. "That meant protecting ourselves from lapses in the production of the strategic materials we needed for the war. Now we are down to basic levels. We are laying

down a program of health and sanitation for the people who continue to live here, and the hundreds who are coming in all the time. It is quite an experience to be on this particular job, because everything we do is visible. The whole valley is on the move forward, now that disease control is showing results, and SESP is at the head of progressive march. The people regard it as one of their institutions, working to make things healthy in their valley. It certainly makes things easier for those of us sent out here to sweat out the job."

I thought I knew what Cliff meant by this. I had heard the Brazilian commentator Tovaes da Sa say that the cooperative programs of the Institute of Inter-American Affairs represented a type of international cooperation "visible to the man of basic level." In other words, any ordinary citizen could see for himself what was going on. It was a Brazilian version of what Ed Brooks had said, back in Haiti, as to how the programs closed the gap between himself as a person and the doings of his government.

Cliff ambled on, and Dr. Campbell's remarks about going in "with all fists flying" took on richer meaning. That water supply plant we had seen at Colatina—a neat little pumping station and rapid sand filter perched high over the river—was one of the model structures built for permanent service in the valley. Others already finished were in Governador Valadares and Aimorés. In contrast to the old steam plant we had seen burning up ten or twelve cords a day of what would be high-priced wood in the States, their motive power was hydro-electric, a relatively simple matter of harnessing the "cachoeiras" (waterfalls) of the valley's feeder streams. Cliff explained that rapid sand filters required some complicated machinery and operational skill, and hence SESP was training engineers to run the model water treatment plants.

"But we are trying for simplicity as well," he said. "So for the other four systems planned we are going to put in slow sand filters well up on the hillside. Then we can pump from the river, and let gravity take care of the rest. It means less chance of operational error. Sanitary engineering has to go through stages here, like everywhere else, I guess. People have to learn and build and modernize as they go along."

Sewage disposal operations, as might be guessed, started in

village backyards with the building and instruction as to the septic characteristics of privies. Upwards of three thousand had been constructed and another thousand planned for the growing communities. At the same time complete underground water dispersal systems had been completed for Colatina, Governador Valadares, and Aimorés and plans were being drawn up for three others.

But there was one simple object lesson which Cliff seemed to think would be as revealing to me, and as important, as any of the more complex engineering feats.

"The Rio Doce is full of schistosomiasis, a parasite which enters the body through the skin of waders or bathers," he explained. "So we have had to provide treated water for public laundries.

"So long as we have that"—and here he gestured toward a group of women squatting on their heels in river pools to do their washing—"we're going to have schistosomiasis. It's a struggle. But little by little, when they find that the water we pipe into the public tubs does the work better and can be carried home to drink as well, they begin to stay away from the river." When we got to Aimorés Cliff walked me through the town to the river edge to show me whole batteries of concrete waist-high tubs where women were reveling in the opportunity to rinse their wash clean. Some of their kids, ironically enough, had gone on down to the river to wade.

"Looks like a losing battle," I ventured.

"It's slow," he admitted. "But at first the women hesitated about using the tubs at all. Thought it would cost them something extra. Now they've taken them over. And if you hang around long enough you'll see some kids being scrubbed off thoroughly, after they come back from the river. They catch on!"

As to the educational battle to promote healthy habits of water drinking, Cliff and the doctors at Colatina and Aimorés reported excellent progress.

Before the new systems became really popular, however, SESP had been forced to confront a troublesome economic factor. Rio Doce families had been used to getting river water hauled to them on mule back at small cost.

We worked things out on a water pay basis making our treated water available at the rate of \$1.50 per person per year. That is less than they had to pay the mule-back carriers."

Before we dropped discussion of water supply for that moment Cliff told me that the Aimorés and Colatina plants were set up to process a million gallons a day. Somewhat larger Governador Valadares had a plant of 1,300,000 gallons per day. The idea in all three cities, and eventually for the towns in between was to furnish 30 to 35 gallons of potable water for each citizen daily.

I marked this down as one potent body blow by the integrated campaign against disease in the valley. There had been others in the drainage, swamp spraying, and D.D.T. campaigns which had driven malaria off the scene. There was the constant jabbing at sore spots by the health education teams. In Aimorés I was to run across evidence that Gene Campbell was not joking when he said that Institute men stood for teamwork, and were coached to tackle area disease problems "with all fists flying." In Aimorés I found a Brazilian health doctor who could be satisfied with nothing less than total war and total victory over the disease problems of his community.

Dr. Nisomar de Azevedo was a man of stocky build and medium height, precise from his trim moustache to the tips of his excellently kept fingernails. Though we walked in on him on a Sunday morning when his model health center was supposed to be closed, he wasted no time in throwing open its doors and inviting our inspection. Soon he was before a map of the town (population about 7,000 and growing fast). There he explained the functions of his health center, and the way its work reached into the lives of the people.

"The center is not a static influence alone," he said crisply. "It reaches out over the city, far up and down the valley. We would not consider our job done if we sat back and waited for people to come to us."

And so Dr. Azevedo had teams of sanitary inspectors canvassing each of the city's 1,758 homes and homes in outlying places, getting answers down on a form designed to provide precise statistics on the major health necessities of the general sector.

"There was only one answer to that," said Cliff. "We gave it.

"Thus the family is brought into partnership with the municipality and SESP to see that we get a better community," said the doctor.

These same inspectors watched all eating and drinking places, stores, slaughter houses, and milk dispensaries. They observed conditions at the laundries, alert for complaint or halfhearted use of the water facilities. They counseled families on sewage and garbage disposal, ventilation, screening, and like matters. And they kept an eye on the new construction which was booming in Aimorés and the whole valley.

"The municipality cooperates to such an extent that no building permits are issued without SESP approval," said my doctor in his clipped Portuguese. "And we insist that good ventilation and hygienic facilities shall form part of any architectural plan."

Dr. Azevedo's center provided a laboratory for the community, and also for the water plant. It distributed milk and ran the usual prenatal, child health, V.D., tuberculosis, and worms clinics. Like Colatina and Governador Valadares, it had a staff of visitadoras, or visiting auxiliary nurses to follow up in the homes.

"How does the follow-up work go?" I asked.

"There are five of the girls at work, others in training in Colatina," he answered. "We have the city divided into five zones, with each girl averaging twelve visits a day. As well as following up cases they report on social and economic conditions, the general background of the family. They can call in the guardas [sanitary inspectors] to help with environmental sanitation where that is necessary. They call the attention of the health education teams to sectors ready for the visual instruction which is so popular."

"What percentage of homes in Aimorés do they cover?" I persisted.

"Why—," he seemed surprised, "all of them, of course!"

It was my turn to be a little surprised. I had been used to "pilot-ing processes" in this widespread cooperative health work and had noted that usually sectors of cities were taken to show what could be done and what, under modern public health precepts, should be done. Not too often did the health centers attempt to

carry follow-up work beyond the portals of families who had already sought health center assistance. Here was a daring step toward perfectionism.

"Do your girls all know that the United States is helping in their education and in their work?" I asked.

"They know," he assured me. "And they are happy to be able to tell people that what they teach has been tested already in the United States."

That night as we stumbled over surveying rods and barked our shins on the specimen icebox of the sanitary car seeking our tiny bunk and dining compartment, I asked Cliff if other key towns of the valley were in shooting distance of the Aimorés health coverage.

"They're pretty close," he grunted as he lit a cigarette. "They're all trying. Why, Ed?"

"Why? . . . Why because this is one of the best things in all your work, that's why! Because this is democracy giving one hundred per cent disinterested attention to an unspectacular daily chore. It's Uncle Sam proving to wartime friends of democracy that his genuine peacetime wish for them is health, and wealth, and the good things of life."

We were back in Victoria the next day, having ridden down the valley after dusk on those comet tails of sparks which plume the nights with pyrotechnics along the wood-burning Brazilian railroads. I could not get out of mind the thought of the Rio Doce, reaching out of a sickly past toward a promising future. I talked of it to Dr. Ernani Braga, director of the valley health program. I wanted particularly to find out whether enough had been embraced in wartime planning to insure continued progress in peacetime.

It was not an easy question, and Dr. Ernani thought it over a bit before answering. His brown eyes, pupils large behind strong lenses, square jaw, and lean sunburned face set in studious lines, were less expressive of hesitancy than of seeking precise words.

"I am a career man in the Ministry of Public Health," he said finally. "I am on loan to SESP. That means I will be leaving SESP shortly to take up other duties. So, personally I have nothing to

lose if the cooperative services are closed out by the United States in another year or another month.

"But I honestly believe that in several years the Rio Doce Valley can present the best health and sanitation program in all Brazil. The valley has a future. Its land is rich. It is good for stock raising, growing of vegetables and food crops, and it has tremendous resources in iron, mica, and other strategic materials.

"SESP has done well. But public health is an unending task. We are beginning to get real cooperation from municipalities and states, local organizations and the people. We should not close out the cooperative phases of the work until this sort of cooperation in the public health line has become second nature with our people and their public officials.

"I think it will take another three to five years before our nurses, engineers, doctors, and sanitary inspector training programs will provide depth in trained public health personnel. If there is no extension I am afraid all the work done so far will be lost. No, the programs must go on . . ."

"At least," thought I, "until Johnny Fooks' old patriarch gets his wish."

Johnny had told us about the old man, whose name he could not remember, upon boarding our car at the town of Fundão the night before. Fooks had just broken ground for a water supply system there and the old gentleman had him in earnest platform conversation when we pulled in.

"He was telling me," said Johnny, and he had the air of a small boy explaining to "the gang" why the town preacher had patted him on the head, "he hoped he would live long enough to see Fundão have a water supply system."

IN KING COFFEE'S WAKE:

The "Situ"

THAT very afternoon I had scarcely left the airplane from Victoria before I was again in a car helling it up the slopes back of Rio, past the amazing array of peaks known as the Organs and Finger of God, toward Petropolis and points inland.

In what appeared to be a general conspiracy to keep me from seeing any of the bright spots of life in and near the Brazilian capital we halted at Petropolis just long enough for dinner. I could only guess at the daylight loveliness of this resort of Brazilian emperors and their courts, but even under the shroudings of night there was that air of existing for and by beauty alone, an air peculiar to upper brackets resort towns.

But we had business to attend. "We" were a group of educators and myself, headed by Lloyd A. LeZotte, special representative of the Educational Foundation in Brazil. We must push on through the night to Juiz de Fora, textile center of 100,000 population, a town to Brazilians what Manchester is to Englishmen. Behind us and below Petropolis blazed the lights of Brazil's new aircraft plant. Before us and deep in Minas Geraes was the experimental station and training center for agricultural teachers at Agua Limpa (clear water). The aircraft factory and Brazil's industrial plant generally already were clamoring for trained technicians to keep pace with Brazil's industrial awakening. And in agriculture, young men who understood crop diversification as a means of

dethroning the burdensome sovereignty of coffee over the nation's agricultural economy were at a premium.

Leaving industrial training for a later date we discussed Brazil's pressing agricultural needs at some length as we drove through the night. And I was astonished to hear how shaky was King Coffee's seat of sovereignty in Brazil.

"You see, Ed," this was Sherman Dickinson, chief of the cooperative rural program talking, "the popular picture of Brazil as a lush land of romance and little work for the coffee barons is out of focus. You're going to see some of the effects of coffee's march across Brazil. You'll see why thinking Brazilian agriculturists have been worried. Then we will try to show you why crop diversification is so important."

I tried to keep my mind on what was being said as we hummed along through a tropic night, a fragrant night with coolness added as we climbed into the hills. It was an odd setting for the gathering of hard facts which I put down more or less in the following order:

Roughly, there were two billion coffee trees in Brazil. These trees had a life span of sixty years in good soil, only twenty-five years if the soil was poor. Coffee planting had marched steadily during much of the four and a half centuries since the discovery of Brazil by the Portuguese Pedro Alvares Cabral, from Belém down to Rio, thence inland and westward. It took its toll of soil richness enroute westward where its life expectancy was thirty-five years.

In 1934 there were three billion coffee trees and the dying off of one billion since then had caused widespread concern. Currently the planting cycle was going up, but harsh reality indicated that another billion trees might be expected to die off in another fifteen years. Meanwhile, suitable food crop soil had diminished in the wake of the march of coffee. Roughly it was computed that there were some 65,000 square kilometers of desirable food crop land in the state of Goiás, São Paulo, Paraná, and the others. Further westward than São Paulo the soil was sandy; up in the Amazon it was thoroughly leached out. Where coffee reigned as king there now existed vast soil-depleted regions like parts of Alabama, Georgia, Mississippi. Thinking Brazilians agreed that

the time had come to move away from coffee to other crops, possibly peanuts, soy beans, etc. Some specialists felt that the answer as far as Brazil's future was concerned lay not in agriculture on a vast scale, but on the type of industry capable of paying for food which could be priced high enough to bring in quantities of fertilizer. Even the animals were deficient in phosphorus and calcium, and needed synthetic feeding.

There were other gloomy little facts of farming to temper our zeal for travel through the soft night. My specialists said that despite the benign climate it was harder to raise corn in Brazil than in Iowa, for the simple reason that more man hours were required to chop weeds. Moreover, because prodigal nature had been used prodigally in Brazil, its best lands produced less than half what the farming areas of the United States produce . . . Brazil was wild about tractors and farm machinery, had five million dollars' worth of orders for farm implements on file with various United States manufacturers; yet, with other economic factors in mind, the next step in Brazilian agriculture might well be toward the horse and mule instead of gasoline or fuel oil machinery. Finally, it was not a question of simply introducing United States know-how to Brazil. Some know-how as a starter, yes, but the real requirement was cooperative willingness to understand Brazil's problems and work out production readjustments to her lasting advantage.

"The effects of the war in Brazil were to dislocate its agrarian economy," said Dickinson. "Large groups of people left the farms and went into industrial work in the cities. Others left the farms for the mines. And still others were drawn in large groups to the rubber-tapping projects of the Amazon.

"That general emigration from the farms caused a critical food shortage. All this movement reduced the number of food producers and increased the consumers.

"What we're driving at now is to help the Brazilian farmer get food and other crops back on a stable basis. At the same time we want to help him make a decent living and a decent life out of farming on relatively small, diversified tracts."

We slept briefly at Juiz de Fora. Shortly after daylight we pushed on up country. My educators were not at all satisfied with

the brief time I had scheduled to get an insight into their operations and showed a tendency to use every minute of it in revelation of fact. But now daylight was my ally and as we talked I could make marginal notes concerning a countryside that reflected the charm, if not the practicality, of older conceptions of the planter's life.

We snaked along the Rio Banha, where highway and railroad seemed ensnarled in an irremediable dispute over the right of way. The countryside was alternately quite barren and then profuse with the screening foliage of the tropics—the bamboo, mango grove, and those trees that offer green shade to the passerby beneath their umbrella leafage, but turn silvered faces to the sun. These latter were “embaúba” trees. They grew to considerable height, had broad leaves, and being hollow, solved the housing problem for small termite-like ants. The leaves had a fuzz on their upper sides which turned silver in the sun. It offset the monotony of forest green, like a white streak in an otherwise raven head of hair will add distinction to a woman.

Like the railroad we followed the gurgling river. That is to say we crossed and recrossed it, keeping a wary eye out for sudden pounces by rail-borne traffic. I had to get the record as nearly straight as possible in this confusion of river, rail, and road. As might be surmised, that was the order in which they appeared on the geographical scene, and that was the explanation for their tumbling over one another at all possible points. Having followed the river to serve early settlers along its banks, the railroad had in turn marked out the route for the highway. Both were quite old, and innocent of any straight line deviation from the meandering gorge. There was an amusement park effect to the whole thing, reminiscent of the flashes of passing vehicles and giddy ground slants which take one's breath on a scenic railway.

When I could achieve any sense of stability on the skimpy straightaway, the impression of passing through an old, much-lived-in country grew stronger. There were old iron railroad bridges, one so compressed an example of Eiffel Tower weave that it looked like a covered bridge; and there were villas, chalets, chateaux, and small castles, that took one right back to the mothering Mediterranean. Bougainvillea vine, oleander, corallita, jasmine,

and honeysuckle were profuse, and countless little white masonry bridges led over the river to quick refuge from juggernaut steam train and whining rubber-tired car. As well as I was able to observe, rarely, if ever, did rail or roadway seek relief from their mutually competitive society long enough to cross separately to the other side of the river.

From the more wooded gorge we broke out into country which showed that it had received the kind of centuries old going over that brings agricultural barrenness. The long mountain slopes—and they were too big to be called hillsides—bore little but grass with a purple seed top. This was the oil grass of Brazil, the “capim gordura,” excellent for cattle, but a mark of the last stages of soil fertility. These purple fields rippled in the morning breeze, washing constantly at the feet of scant stands of eucalyptus and other trees planted to replace the native cedros, jacarandas, perobas, guaribus and others hacked down through generations of coffee planting.

There were some coffee plantations still flourishing in rear echelon style for the march of coffee southward and westward. But more in evidence were sorrier looking places testifying to the fact that here coffee had come and had irrevocably gone away. In its place were brake and tree fern, unfailing markers of tired soil.

Dickinson pointed out deep gashes running straight up and down the mountain sides.

“That’s the way plantations were divided in the old slave days,” he said. “The landowners had plenty of slave labor, so instead of worrying about building fences they dug trenches between their properties, twelve feet deep, six to seven feet wide.”

Dickinson explained how erosion, accentuated by the old property demarcation system, had taken a heavy toll. He said the “terra rocha,” that lavender soil of the country we were traversing, had been naturally rich but that now it was pretty well played out. Deforestation, no knowledge of contour plowing, and no refertilization over the years, had had their unchecked effect.

“So it will take a lot of fertilizing to make this land yield again,” said Dick.

Agua Limpa enveloped us suddenly. We had driven miles along

eroded ridges, the terra rocha looking all the more colorful, if purely ornamental, because of the bahacas or huts of mud and wattle the color of burnt orange which studded the countryside. Then we dipped down a long reach of gorge to the foot of a mountain spur crested with a cock's comb array of bamboo and eucalyptus. Rounding this we leveled into a relatively wide valley, in its center the imposing laboratory of the experimental station. There was a children's school, a barracks, and across a wide sweep, the stables, barns, and coffee-drying platform and warehouse, all neat in their buff plaster with royal blue trim. The whole experimental station occupied about 3,000 acres of what once had been a coffee estate. That was the size commonly accepted in the old days of the "latifundisti," or those landlords who did their living in Rio or Lisbon or Paris, as a respectable land holding. Smaller farms running to 200 or 300 acres were known simply as "situs" (places).

And in this expanse of acreage, a situ was what the educational foundation technicians had selected for training of the nation's instructors in agriculture. Plainly the government envisioned more comprehensive use of the nation's land as a step toward diversified agriculture and more stable national economy.

We drove down a cart track to a hollow flanked by hills on two sides and the main road on the other. We came to a freshly built bahaca, its clay still darkly wet. At the moment it was deserted, but far off in the flat land skirted by the merest trickle of a brook a couple of tractors were at work. One was painted a bright yellow, the other an equally discernible scarlet. Both were brand new, or looked it. I was informed later that the equipment was several months old, old enough to have lost its outer sheen on any mechanized farm in the States.

But not in Brazil! With their love of good appearance and appreciation for it, the students kept their mobile equipment shining, though it worked daily in gumbo mud. There was another factor to this constant polishing. I got the impression that the young men at Agua Limpa were really starved for machinery to lighten their tasks and appreciated having it.

"Yes," Dick agreed, "I think it will be some time before they get so used to it that they'll start kicking it around."

Some of the young men on the farm were weeding a big mandioca patch. Others were seeding corn, sugar cane, rice, and cotton. A great deal of attention was being given to construction of some wooden sluice gates to divert brook water for irrigation. On another sector we found them laying out hatcheries and a poultry run. There were the beginnings of a dairy farm, and Elio Raposo, director of the station, told us that the whole shebang should be running full tilt within the next couple of months. It started early in 1947, as the Education Foundation got underway in Brazil.

At the time of my visit there were sixty young men from all parts of Brazil at Agua Limpa. They were selected and sent to the school by agricultural boards in the various states. Capacity for study, character, patriotic and civic pride were among the qualities stressed in selection. These men were supposed to take instruction in planned agriculture to their communities, and having lived the lives of modern farm hands, they were expected to diffuse as far as possible those tricks of modern farming they had learned.

"We are taking them in batches up to sixty or seventy for three months at a time," said Dickinson. "But we won't hold too strictly to the letter on this. The idea is to prepare good teachers with sound ideas on farming so that they will be the kind of influences upon which rural community progress can anchor. So, if we get a good man who doesn't absorb what we have to give him in one term, we'll keep him for another term. The same may be true of different groups from different parts of the country. Given good basic material the training center here will do its best to recognize individual and group differences."

I gathered that the foundation technicians had assumed the lion's share of this teaching at Agua Limpa, during the first few months of operation. They lived there seventy to eighty per cent of their time.

"But of course as this thing spreads out we are going to have some excellent Brazilian technicians to carry on here and at other projects," Dick explained. I said it all sounded like the vocational agricultural training built up during years of trial and error to a

driving institutional force in the United States. Dick agreed that it was.

"We're not experimenting in teacher training," he said. "We're recommending remedies to current practices and assisting in carrying them out, only on the basis of experience."

Dick went on to outline some of the other projects of the rural education program, some thirty-nine in all. Farm worker training, one of those things so successfully set up to help feed troops in the Brazilian bulge area during the war by Ken Kadow of the Food Supply Division, was emphasized. There were sixteen of these projects scattered through agricultural Brazil, projects where interested farmers could learn modern twists of diversified production, storage of grain, irrigation, and fertilization.

Five projects in tractor operator training were in numerical second place in this general drive for more advanced and more widespread agricultural knowledge.

"For too long," said Dick, "agriculture has been a matter of what could be produced by attaching the human back to hoe handle or crooked stick. Now there is an enormous appetite for farm machinery. More tractor operator training projects are wanted. There are fazenda operators who would like to buy more tractors but don't dare because there are not enough trained people to handle them."

To Dickinson this indicated that slow and sure methods would be necessary before sweeping conversions to machine agriculture could be established. While I was there the foundation people were translating job sheets on various types of machinery into Portuguese, something that is usually considered the job of the machinery manufacturer. With these sheets foundation men were making headway in passing on the "why" as well as rule of thumb instructions for operating the machinery.

"Then they will be able to keep up with manufacturing changes," Dick explained.

His list of projects included courses in domestic economy, farmers' weeks, and short courses to be held at strategic centers, rural school improvement, market gardener training, visual education, and the sending of agricultural educators to the United

States. On this latter score another familiar note was struck. The program for educators to be sent to the States was to place them on farms where they could familiarize themselves with practical agriculture. This was another wartime innovation of Ken Kadow's, who sent dozens of Brazilian student agriculturists to work as hands on United States farms, rather than as theorists behind ivy clad walls.

That was my fleeting glimpse of Agua Limpa, a modern rural educational project so similar to what we have in agricultural training centers back home that I could have imagined myself on one of the latter save for the tropical setting. And there was one other distinction. At Aqua Limpa nothing was taken for granted. The young men and their instructors did not seem to feel themselves to be merely a few among many who were learning to make livings in modern agricultural communities. They had the air of people who knew they were pioneering. It seemed to make them more alert.

"Agua Limpa will give you only an idea," said Dick as we drove away. "Too bad you can't see some of the other fifteen federal projects for rural education. If you could I think you would understand that Brazil means business in this thing. You would find the Agua Limpa spirit noticeable in these projects from Natal up where Brazil humps out into the Atlantic, clear on down to the southernmost state of Rio Grande do Sul—wherever there is agriculture in Brazil."

I had begun to sense the vastness of Brazil, and Dickinson's words seemed to encompass enormous territory, indeed. But he explained quickly that 90 per cent of the agricultural and other population of the country was strung out along its extensive coastline. This made the rural educational task more reasonable, made the cooperative projects seem less like pinpricks on the hide of an elephant. And when he further explained that there were twenty state-supported programs in addition to the sixteen federal projects, I could believe that the cooperative projects, given sustained support by both Brazil and the United States, could serve as a pinch bar or lever to set this new hemisphere food supply train in motion.

Once again we passed through Petropolis at night after driving

all afternoon. Again we paused for an excellent dinner and drifted down the monumental highway to reach seaside Rio de Janeiro in the small hours. And finally, this time in a jeep, I found myself looking up the canyon of Rio Branco Avenue, lined with its skyscrapers, en route to the Vocational Training School in the outskirts of the capital.

My first reaction to the national trade school was one of restfulness. For all its shops and rectangular, factory type buildings, some with the saw-tooth roofing so prevalent in our industrial centers, the huge quadrangle had that air of orderly quiet common to centers of learning. To be sure there were young men and boys whooping it up over a soccer ball at the far end of a playing field embraced by buildings which rose as two and three-story walls on four sides. But in the columned inside passages and in the shade of palms and shrubbery in the quadrangle itself, boys and girls of all ages, groomed to bandbox neatness in their blue and white uniform pinafores and jumpers were chatting lazily, reading, or just sitting and resting out the remainder of their lunch period. For these last my affinity was poignantly strong.

But Lloyd LeZotte and George S. Sanders, chief of party for industrial education for the Educational Foundation's work in this line, had other ideas.

"This school," Sanders explained, "can hold its own in any company. It was inaugurated in 1942, and is really tip-top as a layout for vocational training."

"Who would have thought it of a 'play boy' town like Rio," I remarked. The observation was not entirely facetious. Whether the "cariocas" of Rio liked it or not, and as far as I could determine they were vastly unconcerned, their town did have a reputation for night life rather than industry, for the samba rather than the sweat shop. It was next to bewildering to find such a thriving training center for the manual arts so close to Copacabana. I suggested to George Sanders that such an establishment was more in keeping with what one had read about the Brazilian industrial center of São Paulo, rather than with the glittering capital.

"Oh, they have a center there," he replied, "but curiously enough its buildings and equipment are old and inadequate.

"But they have a splendid plan for bringing the school up to

date," he added hastily. I was relieved. For a moment I had been afraid that he was going to let the contrast between the vocational schools of gay Rio and and hard working sober-sided São Paulo stand as just another evidence of the paradoxical which many people had been trying to convince me constituted the main ingredient of life in Brazil.

We trudged over twenty acres of school grounds, shops, and classrooms, a tour in which my pencil had to race far ahead of my feet to keep up with the explanations of my guides, then drop far behind to gather in and bring along some pertinent fact which had lagged behind the line of march. It was exhausting reportage, but on the whole satisfying.

The notes made up an interesting and promising edifice of facts. Brazilian law, for example, for many years had established national trade schools in each of the twenty-one states. This had been done, presumably as a matter of foresight long before the population had reached the current estimated figure of 45,300,000. The schools ranged in size from capacity for 200 to 1,000 students. The Rio establishment was peopled with 824 day and 128 night pupils, had 112 teachers, and was coeducational on a legalized forty per cent enrollment of girls.

"In some of the states," Sanders said, "there are state trade schools. Then there are apprentice training under the labor department, commercial courses under the department of commerce, and public service under that department."

Brazil, it was emphasized, had not lagged in legislation seeking to open the training doors for the skilled hands it would need in its industrial evolution. And in some instances this big South American nation was socially ahead of the United States.

"The national schools provide free medical and dental service for their students," Mr. Sanders elaborated. "They take care of student funerals and they provide free breakfast and lunch. All of that is real encouragement for parents in the lower income brackets.

"But there was little or no teacher training in the vocational fields and the only supervision was through a national director," he continued. "The Ministry of Education decided to rectify this when they entered into agreement with the foundation."

Sanders was an exceptionally big man with the placidity of expression and ponderous body movement which often marks outsize members of the race. He spoke slowly and quietly.

"We," he said, "do not try to force anything on our Brazilian colleagues. We are here simply to show them what we've got, what we have developed in the way of trade school education. And we are here to find out what they've got. Some of those things are better than what we have at home. We will take those ideas back."

In this consummately "folksy" process the Educational Foundation had sent into Brazil specialists in teacher training, shop organization, management and safety education, instruction material, and visual aids. In the United States' contribution to the joint program, emphasis was placed on suggested improvement of things already extant, a general gathering in of loose ends. Then, too, the sending of Brazilian technicians to the United States was underscored. Forty of these men from the various states of Brazil had left in May of 1947 for a year of weighing and selecting United States methods which might be best adapted to the vocational education needs of the big and historically friendly republic under the Southern Cross. Their schedule called for four months each in trade schools, trade work, and teacher training courses. Later the cooperative service was to send vocational school directors in two groups to appraise and absorb school administration and curricula. Still another project was to send men of national supervision level from the north and from the south of Brazil to delve into our supervisory system.

"You see," Sanders repeated, "we want them to see everything we've got from top to bottom. Then they can use what is suitable, discard what they find to be obsolete or, for their purposes, impractical."

We progressed through a big bookbinding shop and Louis B. Beres, an educator who was with us, told me that after four years in one of the trades offered by the school a student could take three more years of instruction and qualify as a supervisor. Parenthetically, I noted that a lot of the equipment in the printing shop was German and French, some obsolete. I was informed that the school was trying to purchase United States machinery. The same

was true to some extent in machine shop and smithy, in the carpentry and electrical shops.

"The way it works here," Beres was saying, "a student becomes a craftsman, or skilled worker, in four years. In three more years he can become a technician. Then, if he so desires, he can enter the polytechnical institute and study engineering."

"How do they get in here?"

"They have to apply. Requisites are graduation from the five year elementary school, some math, Brazilian history, and general aptitude for craftsmanship. This shows up in the entrance exam."

The cooperative service was helping establish a smaller but excellently planned national industrial school at Curitiba, and it was deemed too bad that I could not go on down to São Paulo and see the work being started there. Instead we went to a cool upper wing where girls were learning dress and hatmaking, household decoration, and the putting together of artificial flowers, so real looking that I thought those on display were classroom ornaments plucked from the garden. The needlework, too, was exquisite, something that took one right back to the Iberian peninsula, the Canary Islands, or the Azores.

I could have wished for more days with the cooperative educators. Jaded somewhat by years of international news reporting I envied them their daily contact with the deeper, sweeter story of developing youth.

But reporters can't linger. I counted myself lucky to have a last, quiet evening in Rio with Mr. and Mrs. LeZotte. Lloyd was what the Cubans call an "aplatanado" (nearest translation "accustomed to bananas"). It is the Cuban way of accepting a Yankee as one of them. Lloyd had served in Puerto Rico and Mrs. LeZotte was as Spanish as the music of Seville. Lloyd had the blue eyes of an American in one of those intelligently mobile and wide-mouthed faces that spoke of the French Basque country. He was easy going, given to half-serious quips, but when he spoke it was with a combination of studious restraint and feeling.

"All of those things are true, Ed."

We were talking of Brazil's agricultural and general economic problems.

"Brazil has as many problems as the next country. It has been worked over, its resources snatched up and dissipated wherever they came within reach. But many things were passed by unnoticed, things that are starting to become noticeable now. There is soil rehabilitation and conservation within reach, and Brazilians are passionately devoted to their soil. There is a capacity for readjustment in the people, and a zest for living, which means an appetite for productive work. You've seen how enthusiastic they are when it comes to putting minds and bodies into work which will pay off for their children. And you know that their national resources in carnauba, Brazil nuts, cocoa, minerals, cattle, fruits, cotton, sugar, tobacco, hardwoods, and a lot of other things have only been scratched. Why shouldn't they have a country as good as ours, as good as anybody's?"

I took the question to my hotel to sleep on it. Next day I flew South through wind and rain storm, fog and cloud bank, catching only snatches of the land below through the greater part of the daylight hours. What land I saw was still Brazil. I recalled the long flight down from Trinidad, a good part of it over Brazil, the nightlong push through the gloom between Belém and Rio—all of it still over Brazil and with our plane bowling along at better than 230 miles an hour. Certainly Brazilians had plenty of country with which to work. The people need not feel cramped. And then I remembered how Dom Pedro I, son of the Emperor João VI of Portugal had won independence for Brazil simply by writing and telling his father that he was taking the Brazilian throne; how Pedro II, the so-called "republican emperor," had striven against inherited feudalism and had abdicated in 1889 "for the good of Brazil" when the combined pressure of political factions had made that course the alternative to possible bloodshed in his behalf. I thought of the merry-eyed children of Brazil, growing up with no feeling of racial gradients; of the Brazilian soldiers who fought with courage and dash in the Italian campaign of World War II. My thoughts paraded past Doctor Campbell, John Faulkner, Cliff Bovée, Dick Dickinson, Ed Sheridan, Bob Mein and the others of my own country to linger with Doctors Andrade, Almeida, and de Azevedo, the vital young director of the Rio vocational school, Ernani Braga of the Rio Doce program,

and those live young visitadoras I had seen in the Amazon and up in Minas Geraes.

"Perhaps," I murmured, and as we bounced through the stormy sky toward Montevideo I was agreeing with the essence of Lloyd LeZotte's final challenging query, "perhaps they will. In some ways, maybe they'll do even better. Why shouldn't they?"

URUGUAY:

Her Solutions Are Her Own

"If you like what you're doing and always tell the truth about it, you don't have to remember how to justify a lot of lies . . ."

This bit of homespun philosophy, quoted from a high ministerial source, stuck in memory as my real introduction to Uruguay, long after I had left the little republic on the Río de la Plata. It stood out boldly as the symbol of a national spirit well suited to a landscape which obviously demanded of its people those rugged qualities best exercised on a dawn to dusk basis.

Again, and almost literally, I had stepped from an airplane to an automobile. The man talking was tweedy, pipe-smoking H. Jackson Davis, M.D., Dr. P. H., formerly of the New York State Public Health Service, and now chief of party for the Institute of Inter-American Affairs in Uruguay. He was quoting Dr. Enrique Claveaux, Uruguayan Minister of Public Health, who was fast asleep on his shoulder.

"I don't know exactly what I expected of Uruguay," I said, chin on the seat back, and my lips close to Davis' tufted starboard ear, "but I certainly did *not* figure on finding myself plunging through a foggy night to God knows where along with a cabinet officer."

Davis chuckled.

"He may surprise you in a lot of ways," he said. "If," he added, "you can keep up with him."

The minister stirred, asked where we were. Dr. Davis said we had another hour to reach the town of Mercedes.

"Good!" said Dr. Claveaux, "you drive and I sleep. Tomorrow I talk and you sleep." His voice rose in a short crescendo of bari-tone laughter, subsided in a throaty rumble, and with a contented sigh he was again asleep. Tuned to an anticipatory mood by this evidence that I was in excellent company, I waited until I was sure the minister was well corked off, then began to ask questions. Dr. Davis began to fill me in on our mission, the kind of thing I might encounter, and what all this nighttime hurtling over the countryside meant in the cooperative scheme of things.

"He does it almost every week end," said Davis. "He started it during the smallpox outbreak last April. Our cooperative service had been called in to help fight the epidemic and one result was that we all went to San José one week end to hold on the spot consultations with local doctors and authorities.

"He," indicating the slumbering minister, "was so favorably impressed by the results of this extra-curricular ministerial work that he inaugurated a policy of week-end field trips. He is covering all the departments and principal cities of the Republic. Now he's got the other ministers doing it."

I didn't find this too remarkable, and said so. Back in the States it was common to have cabinet officers bob up in one or another hinterland spot to "meet the people."

"Yes," agreed my doctor friend. "Here, too. But here, as in the States the accent has been on politics. You watch as we go along. See if you don't think he has added a rather rare ingredient."

After a time the concrete and asphalt paving ended and we were on gravel. It was hard, well packed, and nicely graded. Dr. Davis diminished speed only a little, conceding the possibility of loose gravel here and there. The precaution, though wise, proved unnecessary. We struck no loose stuff. Still fogbound, we drifted into Mercedes, foggily tumbled into excellent beds at a modern little hotel. We were to be called at 7 A.M. That would give us plenty of sleep—four hours! I was beginning to think four hours was the terminal point for sleep, beyond which people in the other American republics could not calculate. I had to retrace my

itinerary as far back as Belém to recall encumbering a bed for any longer stretch of time. I hastened my undressing and after feeling the good wool in the blankets decided I need not keep on my socks. But I hung my leather windbreaker on the bedpost, just in case. The winter night of Uruguay, described by Dr. Davis as rather warm for the season, nevertheless cut into flesh and bone conditioned during the past weeks in Haiti, the Amazon delta country, and Rio de Janeiro. Soon I was warm and sleeping double time.

Next morning it was as if I had been led blindfolded into the heart of the Uruguayan gaucho country, and then, like any unpredictable colt, had my blinders snatched away, been given a slap on the rump, and told: "Now run!"

At least that was the mental effect. The air was crisp with only a suggestion of the night's fog steaming up from grassy glen as we coursed through countryside alternately as flat, and almost as black, as a phonograph record, and then billowing gently like the long rollers of the Pacific. Our road took turns at being red, or dun colored, depending on whether the rich fields extending on either hand off to the horizon were cushioned with red or black loam. In either case they were rich. They supported generous crops of alfalfa, clover, grains, bean and other vines, potatoes, and whole inland seas of the worshipful sunflower. I was told that our journey came at the wrong time of year for the full effect of sunflowers in bloom, but there were enough late, unharvested stands of this oil-producing plant to give the impression of whole congregations of slender, green clad devotees, raising golden faces to the rising sun.

Our road seemed to think little of distances. It seemed to me that I spent the whole morning pursuing a peloric course into country that grew richer in fields and cattle the further we drew away from Mercedes and Montevideo.

Fact supported fancy as far as the cattle were concerned. For in all truth we were wheeling deeper and deeper into the gaucho country. We crossed the Río Negro (Black River) which bisects the republic on a northeasterly-southwesterly line, and left behind the fields of wheat, linseed, flaxseed, and corn. We lost

touch with peach and apple orchards, and came into a hell-for-leather land where man and boy and bang-tailed horse moved as one. This was a land where even our carefully groomed motor road was nothing but a tolerated concession between two broad and soft "drives" churned to a comfortable ooze by thousands upon thousands of cloven hooves.

The traffic along these fenced cattle trails was something to see. On occasion there would come a milling, bawling herd of white-faced Herefords, fat, saucy, and ready for the slaughter house, guided by a superbly mounted lone rider forward, and being "hazed" along on flank and rear by equally well-mounted men and boys. Then would come a flock of sheep, elliptical in their heavy coats of mudstained wool, and equally dependent on horse, man, and boy for guidance to their ultimate destiny. On the skirt of the hard road horse-drawn farm carts would sometimes draw aside to let us pass. But as far as I could judge the gaucho custom tended toward riding a horse astride or leaving him alone. The vehicular traffic was made up mostly of cars and trucks, some of which must have been new when I was a boy.

I wondered aloud about the gaucho ability to keep the old cars going, but Dr. Davis had the answer. He said that there really was a rich and unadvertised store of mechanical aptitude in the Uruguayan gaucho. The lively old automobiles furnished just one indication of this skill. With their farm and other machinery they were equally skillful on upkeep.

"They have to be," said the doctor, "and that's the way they like to be. Not forever flipping from one new gadget to another. They can keep the same machine or implement working longer than any people I have ever seen."

We came to Paysandú. Paysandú, pronounced "pie-sahn-doo." It was as lovely a little town as its oriental sounding name. But it was not lovely in the same way. Here was no element of oriental mystery and mysticism, to pander to half-thought of seduction, opium pipe, or hashish, beyond curtains of threaded reed or colored glass. This was a town planted forthrightly on the banks of the Río Uruguay "by God and by my Spanish right arm," as militantly Catholic with its ancient twin-domed cathedral and

"plaza de armas," as León or Valladolid; as lustily withal charmingly Iberian as Córdoba or Zamora. Even the Chinese gongs which seemed to sound out with the name were misleading. Paysandú was really a contraction of "Padre Sandú," name of an unconquerable early Jesuit.

It was in Paysandú of the dulcet name and more than a hint of rollicking, raw old Spain, that some logical sequence was given to my impressions of Doctors Claveaux and Davis and a type of teamwork that seemed to crystallize rather than dull the stout individualism of the forthright little republic.

Claveaux and Davis were apostles of preventive medicine. And they were pipe smokers. There, personal similarity ceased. With his stringy bow tie, tweeds, and purposeful tan oxfords Davis would have looked at home in the judge's stand of the annual state fair in Syracuse, New York. But since his graying dark hair, thinning back from the forehead, stayed within semiconventional limits at neckline and sideburns only at Mrs. Davis' insistence, my picture of him as a country doctor type seemed to fit better than anything else. He was a shaggy man from the collision mattress on his chest to tufted shoulders, eyebrows, and brow moustache. Yet with him always was the aura of a vigorously scrubbed body and antiseptic hands.

More regular of facial feature and tidy as to attire, Dr. Claveaux seemed more the city doctor in Davis' company. He, too, smoked a pipe, but not the great open hearth with the underslung sludge trap which had made Davis known as "el hombre de la pipa" (man of the pipe) the length and breadth of Uruguay. Dr. Claveaux held a lighter S-type oven between clean-shaven lips and even white teeth. Dr. Claveaux' hair, brushed straight back over a dark forehead tanned to nut brown by the Uruguayan sun, was neatly trimmed around temple and neckline. He wore a dark business suit, scrupulously polished black shoes, and his linen, set off by a subdued four-in-hand tie, would have looked well at a board of directors meeting. Claveaux, too, had a doctor's scrupulously kept hands, but his nails showed more regular manicuring than did Davis'. Between pipes Dr. Claveaux would sometimes light a cigarette. Davis' biggest concession in this regard was to light a stogey.

I had entertained some hope as midday rolled around that Dr. Davis would take the minister's quip of the night before seriously and duck the formalities of a cabinet officer's visit to Paysandú in order to catch up on some sleep. It would have permitted me to do likewise. But Jackson seemed to have had his quota for the twenty-four hours. I had to tag along.

"As surgery is passing from mutilation to plastics . . . so, preventive medicine is taking its dominant place alongside brilliant individual operations . . . to get results in public health we must go to the people and so we must have mobile X-ray units to cruise the countryside and take records . . . The United States public health services have proven that lowered communicable disease indices go hand in hand with social progress . . ."

This was no podium address. It was Dr. Claveaux, back to the door of a new operating suite being inaugurated at the general hospital. He was talking straight out to doctors, nurses, church and civic leaders who pressed in on him from both reaches of a long entrance corridor. Beside him, close enough so that the cabinet officer could occasionally rest a hand on his shoulder, was a white-haired man whose beaming, ruddy face proclaimed his north Italian origin—Dr. José D. Paretti, donor of the operating room in honor of his mother, Carolina Stirling de Paretti.

"We who learned surgery in the old operating rooms can appreciate the progress inherent in your donation," Dr. Claveaux told his friend. "Surgery has made tremendous advances."

Then he was back again on the subject dearest his heart. Paysandú had always been a progressive town. With Salto, Mercedes, Florida, and San José it was among the principal cities of the republic. Hence it was fitting, even imperative, that Paysandú keep pace with the world in matters of nutrition, prenatal care, communicable disease control, environmental sanitation.

In Jackson's broad wake I had pushed up to where I could make fragmentary notes of what the minister said. Uruguay, it seemed, was free from typhus, malaria, yellow fever, bubonic plague, and for more than twenty years the department of public works had worked tirelessly for clean water supply. There was still room for progress in this respect.

". . . and I can say that typhoid, diphtheria, smallpox, and

other diseases for which there is vaccine, are on the wane," my minister said.

"It all means that we should be able, and most certainly should, push harder against those diseases that are still in evidence," he said. "We must *not* be put off by references to this as the 'machine age.' For, after all, we are working for the human machine, the most important of all machines. . . ."

Doctor Claveaux went on driving his facts home, at the hospital, at a tremendous barbecue luncheon in the open air atmosphere of the racetrack betting hall, at a motion picture house meeting of civic leaders. He spoke in the informal atmosphere of cocktail parties, in hotel lounges, and during those rare moments when only a few local leaders would be gathered at his dining table. Over that week-end I heard him speak so many times I failed to keep reliable tally. He discussed the smallpox epidemic, which he called "alastrim" or minor pox. He talked of milk for children, spoke of venereal disease, alcoholism, typhoid, tuberculosis, diphtheria, malnutrition, and those other diseases of temperate climates to which Uruguay was vulnerable. Never were his forensics stylized, and never did he repeat himself, though his topic was often an old standby.

"He really does like what he is doing, doesn't he?" I half-questioned Dr. Jack.

"What do you think?"

I did not have to think. The evidence was before me, four-square and convincing. No man could, without repeating himself, talk that much about the same general subject matter, unless he could draw on an inexhaustible well of interest, observation, and inspiration.

There was another thing about Claveaux which made me thoughtful. Time after time I heard him say that his job lay not in saving money for the people of Uruguay but in spending it.

Clever politics? I did not think so. Not after looking over the intelligent, sometimes hard-bitten faces of his audiences. Many were deeply engraved with the lines of enforced thrift, all critically intent on what this cabinet officer had to say about shelling out for health protection of the future. I heard him talk at one meeting directly on the heels of a speech by Finance Minister

Ledo Arroyo Torres, who assured the gathering of country men that the condition of the world markets for hides and grain, meat and wool were such that they—the Uruguayans—must face an indefinite period of harder work accompanied by financial retrenchment. Claveaux told the same people that in his estimation the national budget for public health, which ran to fourteen million pesos should be increased to 25,000,000 pesos, “not for new things particularly, but to fully develop things already started.”

It was then that I understood Dr. Davis’s remark about there being a new ingredient in this ministerial junketing inland.

“He seems unconcerned about high policy and in no sense bothered by political front,” I offered. “He appears, rather, to be bent on first hand appraisals and health pronouncements and ‘to hell with politics.’”

“He leaves high policy to the President,” said his admiring colleague. “And I don’t think politics bothers him at all. He regards his cabinet post as a God-sent opportunity to do a good public health job. I don’t believe he thinks beyond that point, not while there’s plenty to do in national hygiene anyhow.”

We left the ministerial party the following day, and made a side trip to the river town of Fray Bentos where a cooperative health center was in operation. On the way Dr. Jack retraced steps the Servicio had taken to combat the smallpox outbreak, just then being brought under full control. He spoke of how Miss Alba Castillo had been assigned to remain in San José following Dr. Claveaux’ visit there in April, 1947. Under her supervision vaccination posts were kept going full blast in the city parks and hospital until immunization was reasonably complete.

Back in Montevideo, Drs. Cappeletti, Davis, and my old friend Rosina Romero * (transferred from Lima) set up a general vaccination campaign for the capital and the other communities of the republic. A switch from the established method of making two scarifications in case one did not take was involved. The multiple-pressure method, minus scratches and blood and the tire-patch type of scars of older days, was used. Not without some grum-

* Rosina Romero, transferred from Peru to Uruguay to continue instruction work in public health nursing, was killed in line of duty Sept. 12, 1947 when the car returning her to Montevideo from an inspection trip to Fray Bentos was accidentally wrecked.

bling by local doctors as well as the public, however. Miss Castillo reported that she felt she had entered a war theater on taking over her post at San José. Troops were everywhere, jeep riding vaccinators to fixed or mobile posts. At commanding officer's quarters technicians were busy blocking out infectious zones on the map. Other troops patrolled the city to enforce rigidly the display of vaccination certificates. Her first meeting with vaccinating personnel was in her own words "a stormy one."

"After a practical demonstration of the multiple-pressure method, the protests and objections began," she reported. "It was only the natural and systematic reaction of having to adopt a new technique and having to put aside one which for many was something of an art, to which they had been devoting themselves for perhaps twenty years. My eyes spotted a bell which the General of the Army post had placed in anticipation of the event. I had been overoptimistic in believing that I would find a flock of gentle lambs."

But Miss Castillo never quite reached the point of sounding the bell for the exercise of sterner authority. She finally told some of the more obstinate that their distrust of the new technique, one, incidentally, that promised to save quantities of precious vaccine, was like refusing to enter a building for fear the roof might fall in, or declining to ride in an automobile because the wheels might come off. Twenty-four hours later, she reported, "all concerned" praised the new technique, which had overcome "existing deficiencies in materials available."

Dr. Davis's voice took on a vibrant quality. It was as suggestive of elastic power as the hum of the engine under our toes as he described other teamwork offensives against the smallpox outbreak.

In Montevideo a standardized vaccination service using the multiple-pressure method was established by the ministry of public health. Strategically located vaccination posts were set up throughout the city. Vaccine, cotton pledgets, refrigerator and sterilization facilities were organized. Montevideo—all of Uruguay—went to war against a virus!

"And we mustn't forget our soft-ball league," Jackson insisted. This was a volunteer organization of Uruguayan, United States,

and British women. In it Mrs. Davis was a moving force. Encouraged by Claveaux and Davis, the women got together around a big oval table in the ministry to roll thousands of those small cotton pledgets, which were then sterilized and used in the vaccination process. The women of the "soft-ball league" spent hours reducing bales of cotton to this medical purpose. They developed their league into a forum for Spanish-English discussion of hemisphere and world affairs and were still working along these lines of practical understanding while I was in Uruguay.

Then Davis described an incident which gave substance to a statement made in the early days of the Institute by its first president, Major-General George C. Dunham, and quoted later by his successor Colonel Ben Gotaas. At the height of the antismall-pox campaign Dr. Claveaux had sent out a hurry call to the Institute for emergency shipments of vaccine from the United States Public Health Service. Jackson Davis rushed the call to Dr. Richard Plunkett, director of the Institute's Health and Sanitation Division in Washington. Dick knew of a closer source of supply from following progress reports of the Oswaldo Cruz Laboratory in Rio de Janeiro, and through Dr. Jean Campbell placed the Uruguayan request before the Brazilian government. Result—500,000 units were supplied gratis by the big Brazilian neighbor in a series of weekly installments. Argentina and Chile, too, stood by to rush in emergency shipments should they be required.

"That's what Dunham and Gotaas meant when they said a health problem in one American republic must become a problem for all," I interrupted.

We pulled into Fray Bentos (Fry-ben-tohs) and after an indifferent night's sleep in a cold, old hotel went over to the new health center for breakfast. I found the center housed in the unpretentious, functional type of building which for me was typical of the structures approved by the Institute of Inter-American Affairs.

Our visit was timed just right. I had seen auxiliary nurses—the famed *visitadoras* of the cooperative programs—in class and in clinic. I had seen them tripping to or from their follow-up work in the Amazon jungle, the high Andes, in Central and South

America, and the Caribbean. But never had I seen them in actual "follow-up." This, to me, was just a phrase. At Fray Bentos I finally got to a health center before the follow-up work began, and I determined to tag along, if possible, to see what happened.

Miss Enelida Geymonat, supervising nurse at Fray Bentos, decided my presence would not appreciably interfere with the work. Soon I was hovering somewhat nervously behind the shoulders of blond María Emma Inderkum, twenty-one, whose forebears somewhere along the line had been Swiss, but who was Uruguayan to her pink fingertips for all her golden hair, blue eyes, and rosy cheeks. I don't know why I was nervous except that the prospects of barging into a strange home where sick talk and the feminine note were bound to be predominant always made me fidgety. But I followed when Señora Lili Requiterena de Blanco opened the door, determined to report what seemed salient. Two things were that in my limited male lexicon: Young María had made herself part of the family; her consultation with the señora was unhurried and not stereotyped.

What they talked about I never did get precisely. It had to do with diarrhea, teething, weight, reaction to a vaccination, and the sleeping and eating habits of a husky year-old character by the name of Sergio who looked to me as though he were pretty capable of taking care of himself. While the women talked and I tried to line him up in my camera lens, young Sergio did a grand tour of living room, patio, and hall. He led me into rooms where I was certain I had no business, tried to establish a beachhead in the pantry, and several times when I could have sworn he was elsewhere, darted between my slightly bowed legs. This was the home of an average family, not rich, but with no sign of privation, and there was intellectual conviction in the way the señora checked off Sergio's progress since he had been under health center observation.

Our next visit was to a more modest establishment, where the effects of small wages, overcrowding, malnutrition, and illness were apparent. Vicente Raúl was the name of the six-months-old patient. He was suffering from persistent diarrhea and earache. Lili Villanueva de Sosa was the nurse in charge. Again there was nothing perfunctory about the visit and again the nurse became

a part of the family, this time a family housed in one dim room of a tenement building. Both mother and nurse were confident that young Vicente Raúl was on the mend, the mother profusely grateful about it. Lili, it appeared, had followed up this case on orders from Dr. Francisco Luckly of the center. Another Fray Bentos doctor had been serving the family. Lili made appointments with him for the family, furnished him with health center findings. Vicente Raúl's treatments received new impetus. Not only was Vicente Raúl going to live, but less frequently would his mother hear the heartrending cry of a baby in pain. While I was there he was yelling his head off—for food!

I went back to the center and talked with Enelida about her girls. I did not have to prompt her much. Enelida had been in the States on a nursing scholarship and while she was genuinely complimentary of my country and our ways and our people, she felt secure in matching her girls against any. She had sixteen of them, doing for themselves in a dormitory where she was "house mother." Four were Fray Bentos girls. The others came from Treinta y Tres (the town named for Uruguay's thirty-three founding fathers), from Melo and Mercedes. They were with Enelida for a six-months training course, its first precept being that the girls were entering a "new career and a good one."

"They are selected by democratic process," said Enelida. "They must be recommended by the people of their home towns and if accepted they get scholarships. This makes for a high type of applicant. I know of one case where a citizen, enthused over what he saw at the health center, went all over town urging girls with the best possible background to enroll for the honor of his city."

She chuckled. "But our real prerequisites are intelligence and good character," she said. "We have one girl who has already had two years of medicine, two with two years of law, and two with two years of dentistry. All the others are high or normal school girls. They are quick. They know what they want."

She needn't have told me this. It was obvious to anyone who saw them in action.

"I haven't just introduced you to the atmosphere of Uruguay. I've thrown you right through the middle of it!"

Dr. Davis was not exaggerating. Again we were jogging along at a comfortable sixty over the paved Pan-American Highway which connected Uruguay and Argentina. Again Dr. Claveaux was in our car. So was Dr. Ricardo Cappeletti, chief of the Division of Hygiene of the Ministry. There was recapitulation of the results of the ministerial trip, a fill-in from Davis on Fray Bentos. To me, of course, it was all rather new material. I learned, for example, that the trend in Uruguay was, in a sense, toward modification of some of the effects of socialized medicine. Free medical treatment for the poor had been part and parcel of the Uruguayan system since the divorce of church and state some thirty years ago. This had brought about a concept of social security implying maximum wages and sick benefits. The effect on the medical profession had been that doctors vied to obtain federal staff positions, relaxed their interest in personal and community practice. The cooperative health centers emphasized complete community checking up, referring cases back to local doctors. This tied in the local doctor with community progress, also clearly implied that doctors on the federal payroll must serve their communities, not just draw their federal pay.

Davis digressed for a moment to explain that he was learning as much from his Uruguayan colleagues as they were from him. Our Uruguayan friends wanted to know how this came about.

"Well, when French was down here he looked over our plans for the Montevideo health center," Dr. Davis explained. "You remember how we went over a lot of plans which I had, and modified them to suit climate, light conditions, and the attitude of some of the Uruguayan women?"

"Well, French thought we had hit upon a combination of practical ideas which would work out fine back in Maryland. He took copies of the plans back. That's what I call setting up a two-way flow of ideas."

The others concurred. Later I checked up and found that Dr. Davis had been talking about William J. French, technical consultant in maternal and child hygiene of the Children's Bureau, in Washington. This specialist had thought the plans worked out for Montevideo would be just the ticket for health centers in Anne Arundel County, in Maryland.

There were many things that entered into the conversation, things taken as matters of course by our Uruguayan doctors. But they left me a little amazed at the vision employed by leaders of this small nation since José Gervasio Artigas first raised the banner of independence against Spain in 1811, since the famous "Thirty-Three" led by the Artigas lieutenant Juan Antonio Lavalleja infiltrated in 1825 and broke away from the Portuguese, who had invaded the young republic in 1816. Following in the spirit of the philosopher-soldier Artigas, Uruguayan social legislation of a far-reaching nature had been incorporated in the Constitution of 1919, and since that time Uruguay had developed as one of the most orderly nations of the world. There was a program of public works for defense against unemployment as early as 1917. There was a public housing program, state care for mothers, and free medicine for the poor. Women as well as men enjoyed the franchise and had to exercise it or face fine. Wages and hours had been fixed by law, and working conditions subjected to careful control. The eight-hour working day law, enacted November 17, 1915, was the first in all South America, and several times I made my informants repeat the statement that Uruguay was the only country in the world to offer free graduate courses in medicine, engineering, architecture, and the other professions. Elementary education was both free and compulsory, and secondary and university level education offered free to those who wished it. Textbooks could be borrowed, laboratory fees were provided by the state, and post-graduate courses offered in a wide range of subjects.

"I told you this was a civilized country!" Dr. Davis jibed at my incredulity. "Not only is it highly civilized, but it's a free country in more ways than one."

"And pastoral and proud," I amended. We were approaching the grain and orchard country skirting Montevideo, but there still appeared an occasional gaucho, fiercely dignified in his stiff-brimmed Cordova hat, his blue cape with the red lining, the wide money belt holding up those picturesque Zouave pantaloons which flowed over the tops of riding boots and seemed forever about to catch in the huge rowels of silver spurs. As we passed these riders, all of them lithe and some as big as they were tough,

they would solemnly raise their "rebenques" in salute. This was the gaucho quirt or whip—a horn crop, with a knockout knob at the haft end, the other sporting a long, flat strip of rawhide. It was the most humane and effective animal whip I had ever seen. The width of the single strap precluded any cutting into horsehide, yet it was heavy enough to leave no mistake as to the rider's wishes. These superb horsemen typified Uruguay for me, the Uruguay seen in tremendous sweeps of pasture land where cattle, sheep and ostrich roamed in countless number, a Uruguay that liked its pastoral calm but was as alert as the very horses who curveted to attention at our approach.

For some unexplained reason the thought of Admiral Schroeder and a casually voiced opinion by one of the young doctors of Claveaux' group met and fused in my mind as we cruised the twilight countryside. Admiral Schroeder had been chief of staff of the Uruguayan Navy when the British light cruisers *Ajax* and *Achilles* gunned the Nazi pocket battleship *Graf Von Spee* into Uruguay harbor. Grim and slightly built Admiral Schroeder had ordered the battleship out of port on pain of being interned by the Uruguayan Navy. Her commanding officer took her out over the mud and sand bar of the Río de la Plata and scuttled her. Quickly thereafter Uruguay voluntarily opened her ports to United Nations shipping. She had shaped a course of conduct to suit her own conscience.

The other component to this thought was the young doctor's belief that "our culture must remain French, but our technique must be North American."

"North American?" I wondered, and was a little amused. I knew technicians of my country were quite willing to borrow technical methods from the Germans, French, British, Italians, Scandinavians—anybody, so long as the technique was good. "North American, eh! Fine! You'll get the best. Then you can work it over into something Uruguayan which we may well borrow back from you. But let us have some of your social advancement, some of your culture, just as it is."

Dr. Capelletti interrupted this musing.

"It's a mistake," he was saying, ". . . just because we are a small country surrounded by big ones, just because we have al-

ways lifted a voice for peace, and non-intervention, and the rights of small nations, people are always calling us 'the Switzerland of the western hemisphere.' Where do you see any comparison with Switzerland?"

"I don't," I hastened to assure him. "And I won't make any such comparison. I promise you I won't. Some day I might have to return to Switzerland!"

CHILE:

Monuments Underground, Health in the Air

I MISSED the famous Christ of the Andes in flying from Argentina to Chile. The statue marks the dividing line between the two countries near Aconcagua Mountain (alt. 23,080 feet). But there were storms in Aconcagua Pass the day we went through, so we had to take the more southerly pass where Tupungato Peak stood sentry duty at a mere 22,310 feet.

In the pure sense of the word this flight was "awful." It passed us through some of the most appalling scenery of the world. And when I could think in idiomatic terms I also found it "rugged."

It was rough, and accustomed as I had become to flying "through" the Andes, not over them, I was nervous. These jagged rocks, cruelly sharp where they emerged from cotton-mouth gums, extended too far—much too far—north and south, straight ahead and straight up! When it could, our frail ship—by now it had become thistledown in the gusts of Tupungato—was flying nose up and tail down. At other times it seemed to tire and slough off into those weak, fluttering glides which brought the murderous array of crags on either side almost aboard.

Why was this Andean crossing so much more nerveracking than the crossing at Huascarán in Peru had been last year? Because the mountains were so cold looking with all their snow? I couldn't answer. I made a note that the Andes hereabouts simply did not seem generous with mountain passes. They seemed amen-

able to nothing, were prodigal with nothing but their serried fangs.

But later as we began the steep glide that was to bring us into fogbound Santiago I took with me the imagery not of an ice-bound graveyard, but of a great Andean cathedral, its altar hangings and tapestries done in ermine, its spires and chaliced crags suspended aloft for consecration.

Dynamic was the word for Dr. Theodore I. Gandy, citizen of Virginia, San Francisco, the world. Was I to see celebrated Viña del Mar, or the Chilean lakes? Would there be a spot of deep-sea fishing off Valparaíso? Names like Temuco, San José de Maipo, Antofagasta, Concepción and Guayacán were rippling through my brain, some suggestive of sports and good living, others pungent with Chilean history. Gandy had hospitals, health centers, or other operations in these places. Besides, had it not become customary by now for me to linger in a capital only long enough to change to field clothes and kit? What were we waiting for?

Ted had one of those expressive florid faces that gave the answers to questions before his lips could form the words. Surmounted by a crop of reddish brown hair, it might not have been the best poker face in the world, but when he smiled the portals to friendship were opened. It was with this smile that he brought me back to Santiago, where I was to stay.

"You've only got nine days, Ed," he grinned. "I want you to see what's going on in Santiago. Then sometime you can come back for several months and see the rest of it."

He had my nine days blocked out to the minute. Characteristically, he had it on paper in the form of an itinerary. His trim secretary brought it in while we were talking, and glancing at it I could see I was in the hands of a go-getter.

We went to the Trudeau tuberculosis hospital, the cooperative service answer to a serious Chilean health problem. We trudged through the Carabineros hospital, examining its modern, up-to-the-minute facilities. Washington had few, if any, hospitals such as these, not counting the Navy hospital in Bethesda, Maryland. To match them I would have to go to Cleveland or New York, Buenos Aires, São Paulo, some of the other cities of the health

world where building construction, at long last, had been designed to counterbalance the architecture of illness. We visited the Quinta Normal Health Center, built by the cooperative service and turned over to the Rockefeller Foundation and the National Health Department for operation. At the Bacteriological Institute we went through the school of hygiene, built and equipped by the same service. We also saw under construction a special building for the study of virus diseases.

Ted was a busy man. Santiago was a busy city. Between the two I began to search desperately for some leisurely moment in which I could sit down, go over my notes, and discover some salients in the Chilean scene. All these smart new buildings! All these busy professionals! I got a look at Ted's engagement calendar one afternoon and wondered how he did it. The same was true of all the people around him. I might just as well have been in New York or Chicago. Before I had time to get a hair cut I was up to my neck in a business and social whirl that required considerable flexing of the elastics of the brain, and a somewhat more rugged physique than a sinus cold and uncooperative digestive tract would allow. It was only after I left Santiago that I was able to get a look at the place. It was only in retrospect that I could realize that I may have missed the dominating fact of life in Santiago, but that it had not missed me. Life in Santiago was a deep, swift torrent. Its streets were as lively with workaday life as downtown New York. And its offices, hotel lounges, clubs, and homes buzzed with the type of professional and intellectual articulation which I could compare only with similar expressionism in northern Europe and northern United States. If there was any spirit of *laissez-faire* in Santiago, I failed to note it. Rather, in mile after mile of modern dwellings, built specially to withstand earthquakes, in the hustle of downtown traffic, vehicular and pedestrian, and in the sheaves of notes, ideas, projects, and treatises shoved into my hands and pockets at the slightest excuse, I found a community alive in every pore to its responsibilities as a national capital and as a city of the world.

It was all a little bewildering. I tried to cover everything that came my way with the end result of having to go through pages and pages of notes to come, for example, to a statement fur-

nished by Dr. John Janney, representative in Chile of the Rockefeller Foundation, attached to the Quinta Normal Health Center.

"Actually," he said, "there is more cooperation here than we can meet."

That was a poser. That required expansion of a brain cell or two. We were at the Center. It had taken on the name of the Agricultural Normal School, and Agricultural Center (Quinta Normal), around which a community of 75,000 people of low income brackets had grown.

Ted had driven me out to this western sector of the city and it took no keenness to observe the marks of squalor on the place. It looked something like parts of Baltimore or Georgetown, the only difference being that when income brackets are described as "low" in Chile, they are unbelievably low. Matching the general average of 90 cents a day earned by the people of the area against wages for similar work in the States it was difficult for me to understand how anyone could expect better health and sanitary conditions.

Dr. Janney nodded.

"Maybe a thin and threadbare economic cushion quickens understanding of the health boon," he said. "At any rate the people of this area want to improve. They want to live better. They not only accept what the health center has to offer them in the way of cleaner, more comfortable bodies, they demand it."

Dr. Hernán Urzua, director of the center, cut in.

"We are under perpetual siege," he said. "The health center baths are used at the rate of 2,500 a month. They are self-supporting on the basis of about 3 cents per bath. In the tuberculosis clinic alone, we handle 120 children and 40 mothers daily. The other clinics draw proportionately."

Perhaps I was slow on the uptake. Possibly there had been too much high altitude flying. Or the long siege of travel to hinterland places, where scientific approach to problems of basic economy had to be accompanied by indefatigable mass education efforts, had not prepared me for the advanced popular psychology of this sector of Santiago. At any rate the idea of a demand for health and strength outbalancing the supply offered by health center facilities put a strain on my understanding.

"Yes, but you mustn't forget," explained the buoyant Dr. Gandy, "that Chile is way out ahead of a lot of countries when it comes to social legislation, health education, and protection of the young. We're just here as technicians to help along a general health drive that started back as far as 1925."

We went into this at some length, and later I was able to compare facts given me conversationally by Dr. Gandy and his associates, with checked and counter-checked information of the Office of Inter-American Affairs, so ably packed into pocket size pamphlets by David Loth and his staff. These facts showed why Chileans, even of humble communities, need not be subjected to exhaustive health indoctrination before they could understand practical benefits offered by such institutions as the Quinta Normal Health Center. Chile, for example, had a compulsory educational system which was making rapid percentage advances in a population of 5,237,432, already 75 per cent literate. Its social security system, embracing sickness, unfitness and old age, was obligatory and had been established in 1925. Programs of preventive and curative medicine had been in active operation under this system since 1933. The better babies campaign was of equal long standing and funds from social security had been put to work to build low-cost housing for workers, to establish a government-owned milk pasteurizing plant in Santiago and to provide free milk and lunches for school children. And further accenting the need for health the Ministry of Public Health, aided by specialists of the Pan-American Sanitary Bureau had done much in the eradication of smallpox, reduction of infant mortality, and in antiplague work. Quickly the picture of a rugged people accustomed to the hardships of cold and variable weather fighting the diseases common to such climates began to form.

Out of all this there emerged, too, one of those not so obvious factors which made it easier to understand the accent placed by Chileans on personal vigor. It was, simply, that in the Chilean climate poor health could *not* be "enjoyed." To low purchasing power add hunger and the situation would be bad enough. Then add ill health and it approached the intolerable. To this add dank and cold weather, and the human capacity for punishment naturally would reach the point of rebellion.

"I guess it is just easier, or at least it looks that way, to be sick in the tropics," I said. It was a fact that in some of the tolerant climates I had visited I had seen people a lot sicker looking far less miserable about it.

"Anybody knows that poor health is easier to bear when you can get out in the sun," Janney corroborated. "There's another thing. Tuberculosis, which is infinitely harder to cure in cold and congested city slum areas, is the big problem here. We have more deaths from tuberculosis than from all other causes."

We looked into the health center statistics. They indicated that at least one person a day died of tuberculosis in that area. The health center had been making records only about a year, during which time the death-rate curve for the great white plague had been mounting.

"But we expect the curve will level off, as it usually does when all the figures are in," said Dr. Janney. "When the preventive practices take hold it will go down."

He outlined the work of the center. Starting in January, 1943, a house-to-house health census was made. Such things as age groups, housing differences, and previous health treatment were noted. Starting with four nurses the staff was increased until the whole community was divided with each nurse taking over a community of 5,000 people, in somewhat the same fashion that county health nurses work back in the States.

"The fundamental problems were found to be tuberculosis, typhoid fever, and infant mortality," said Dr. Janney. "Of course, these had direct relation to such environmental influences as housing, marketing, and nutrition, sanitary facilities and water supply, and all the other problems of congested communities. Clinics in infant mortality already existed, but they had inadequate facilities for nurses. There were some hospitals, but they had no direct connections with the homes."

The Quinta Normal Health Center started getting its nurses into the homes. Follow up care for infants whose mothers had received prenatal care at the clinic was stressed. Formerly only fifty per cent of the babies born in the area were under any sort of medical control. The Quinta Normal people assured me they now provided medical control for 85 per cent of new born babes

and the percentage was on the rise. The infant mortality rate was on its way down.

For typhoid, the only permanent control lay, of course, in sanitation. To this end the cooperative service, working with the health center, had boosted the percentage of potable running water connections in the housing from 50 to 65 per cent, had put in sewers where this was practical, and elsewhere the homelier but sanitarily effective privy.

"You guys always make out a fine case for privies and sewers," I complained to Ted Gandy, "but they are the hardest things in the world to write about."

"Yeah? Well, you ought to get the Chilean slant on some of the sewer work." He went on to tell me about the laying down of 149 miles of sewer pipe in North Santiago to serve some 200,000 people. He spoke eloquently of sewage treatment plants projected for the city and under construction in the towns of Villa Alemana and Peñablanca in the province of Valparaíso, San Vicente de Tagua-Tagua, San José de Maipo, Antofagasta, Ancud and other towns, towns I had wanted to see.

"The towns sound glamorous, but your damn' sewers don't."

Ted gave me the smile public health officials reserve for the perversely ignorant.

"No use taking you to those places, then. Anyhow, you wouldn't see anything. All the works are covered up under nicely paved streets in most places. The only thing you'd see would be a few commemorative plaques to this cooperative construction."

"Wait a minute now! Wait a minute! Did you say plaques? Monuments? To sewers?"

They laughed, Ted and Dr. Janney. And it dawned on me that they were laughing not only at me, but at themselves. It was the sort of half-joyous, half-rueful jocularly with which people at times mark up a lesson well-learned, one they might have mastered much earlier.

"I told you the Chilenos had a special slant on sewers," said Ted. "You should have been here when the work first started. People were talking about the 'new underground movement in Chile.' They spoke of 'important burial ceremonies' in San José de Maipo and other towns. They made speeches, wrote letters to

the press, and had fiestas. No false modesty kept them from giving unabashed approval to this public health measure. And as the work is finished here and there, they see no reason why sewers and sewage disposal plants should receive less public honor than hospitals or health centers or other monumental institutions."

So fast and furious were my days in Santiago that I could do little more than scribble notes feverishly and trust to luck that they would carry the background material to point up all these kaleidoscopic impressions. There could be nothing eclectic about the reportage. There was too much to see. Later a vignette or two might appear in the notes.

Take Trudeau Hospital. Named after Edward Livingston Trudeau, of Saranac Lake fame, to the layman's eye it could have been just another broad-sweeping plantation type layout of tiled roofing and light, airy rooms. Its inside windows faced on an enormous lawned quadrangle, so that for the ill and the convalescent there could never be any sense of confinement away from the open air. For them there was constant guarantee of maximum lavation in the sun and in the pure air sweeping down from close and comfortably visible snow crests. And the hospital itself had every modern device for cleanliness, comfort, privacy and semiprivacy.

All of which was to be expected, particularly as the edifice represented the carefully selected public health brains of two advanced republics. But I noticed that Trudeau was made to look somewhat squat, little more than an interlacing series of roofed corridors put down amidst the bigger, skyline-mongering buildings of the general hospital for infectious diseases. I remarked on this.

"Oh, sure," said Dr. Ted, "but you see there is a panic factor to consider. This is a country of frequent earth tremors, and Trudeau is as completely earthquake proof as the engineers could make it. But tubercular patients are mostly able to take care of themselves, or get around in emergencies. It is easier to keep them quietly in bed or in their chairs when they know that there aren't whole stacks of upper stories to fall in on them or to take them plunging into a mass of debris. Figure it for yourself."

I did. And marked up Vignette No. 1.

At the Bacteriological Institute I ran into another item that seemed more important than the general parade of facts offered by such a place. The institute was noteworthy, of course, for the fact that it made the biologicals necessary for combating smallpox and other disease, and on an export basis manufactured the arsenicals used in fighting syphilis, diphtheria, and other communicables. It was noteworthy that it was making penicillin, and that it was examining milk supplies in conjunction with the School of Public Health and the Rockefeller Foundation. What I liked most, however, was the fact that among students in this highly organized and modern institution there were doctors, nurses, and sanitary inspectors from Peru, Bolivia, Ecuador, Colombia, and other sister republics. Vignette No. 2. Since the School of Hygiene of the Bacteriological Institute had been constructed and equipped by the cooperative service of the Institute of Inter-American Affairs, here was gratifying proof that Chilean public health people knew how to take disinterested hemisphere cooperation and pass it along.

My final nub of rather more than ordinary fact was tied in with Project 33.

"You keep referring to it," I told Ted. "What is it?"

Gandy called in Dr. Mario Pizzi, who headed up the project.

Project 33 was not really just a single project. It had taken in several others that had gone as far as they could separately, and tied them into one coordinated unit. The contrast between the old infantry company of World War I and the rounded, heavy duty detachment of World War II was analogous to what was happening in Project 33. It was no single group of foot soldiers armed with Springfields. Project 33 had the medical and sanitary equivalents of tanks, light and heavy machine guns, antiaircraft weapons, trench mortars, and artillery.

It tied in rural and municipal sanitation, typhus fever, tuberculosis, and other communicable disease control. It set up standards of food handling and distribution in all of Santiago. Housed in the provincial public health service establishment, it had a staff of twelve doctors, two engineers, four veterinarians, ten public health nurses, and one hundred and twenty male and female sanitary inspectors.

"In the war on communicable disease, we fan out and get into the homes," said Dr. Pizzi. "We furnish lab tests, examine water supply and excreta disposal. Where pipe sewage is inadequate we help . . ."

"I know," I sighed. "You help build privies. Excuse me, doctor, go ahead."

"But we have the sewage system under control now," he continued, "and we are treating the water which formerly was used in irrigation in a rural sanitation program."

That was not all about Project 33. Phil Riley, whom I had last seen up in Chimbote, Peru, was hard at work developing health education programs using motion pictures and visual aids.

"This will be in full development in November. That's when typhoid is usually most dangerous," said Dr. Pizzi. He went on to talk of smallpox, diphtheria, typhoid, and whooping cough immunization programs. The death rate for tuberculosis he placed at two hundred and fifty for each one hundred thousand of population. Infant mortality was about two hundred for each thousand born, or about one-fifth of the yearly baby crop of Santiago.

"But all these rates are falling, and where they show any stubbornness, we bring everything we have to bear," he said. "Project 33 is only two months old, but we think by using aerial photography we can . . ."

"Just a minute, doctor! Did you say aerial photography?"

"Yes," he said, and his intent dark eyes suddenly sparkled. "We are at war against disease! So we are using war methods. Pictures taken from planes will show up localities vulnerable to disease just as clearly as they show up military targets in the enemy lines. They save an enormous amount of time in locating the sore spots. Sometimes they will indicate areas for preventive work long before actual outbreak of disease."

I put a ring around this one. This was a little more than a vignette. It was a star shell, a pyrotechnic cascade.

"Strike up the band, the boys are marching . . ."

The tune to those words zithered out between my teeth.

The boys, the girls, the men and women of Chile, were marching . . . one, two, three, four . . . hep . . . hep! This was a joyful march, a march of beautiful cadence, a swinging, slashing,

“smite them hip and thigh” push against disease. I could have wished for the technical qualifications of a rear rank private in this army of blithe, unpretentious patriots. It was an army largely unsung; a field force whose song I determined to sing.

BASIC ECONOMY OR PRIVILEGED PRINCELING

"LET me take it!"

"Naw, lemme do it . . . I . . ."

"Me! Me! Me!"

I glanced at my schoolmate, Dr. Irma Salas, president of the Chilean commission for reorganization of secondary education, while kids of teen age, and some who looked sub-teen age, clamored for their teacher's nod. I had not paid attention to the question for watching the kids, but the show they put on was easily translated into colloquial English. So much so, in fact, that they did not appear to me to be children in school. Rather, they acted like kids at the playground, each asking for the starring role in the next play.

"They're certainly out to make an impression on you," I whispered to Dr. Salas.

She shook her head slightly. In a little while we withdrew. We had heard a teacher put a number of questions to a class in elementary science at the Gabriela Mistral "renovated" school for boys and girls, that is to say, a public school using advanced methods of education. The response to each question was animated. Incipient little disturbances had to be gently quelled before the teacher could pin the question on one child. Remembering my own classroom experience, when answers to questions had to be extracted like teeth, I felt that the enthusiasm must be due to the presence of my distinguished cicerone.

Once we were outside that classroom she proceeded to change my views.

"I'm just another 'profesora' to them," she said. "They are not putting on anything special. You'll see!"

At the next class we merely stood in a door leading in from the back. The activity was equally spontaneous, though we were not seen. In another section of the building we glanced in a side door. I had a snapshot of several young boys, knees up on their desks the better to attract teacher's attention. We closed that door on a gust of excited debate.

The pulse of the place was transferable. Perhaps I had been born too soon, but it was a fact that the idea of any child actually enjoying school was still too novel to be taken without primary suspicion. For my afternoon I had expected some matter-of-fact delving into educational progress in Chile under plans worked out by the Inter-American Educational Foundation and Dr. Salas' commission. I had anticipated an unexciting time discussing the stodgy facts of curricula with Shriver L. Coover, special representative of the Foundation, and his colleagues.

But here I was in an unpretentious school building named after the brilliant poet who serves as consul for her country in Los Angeles, going to class with a bunch of vibrant adolescents of modest origin, and I was enjoying it. People, I had often observed, are usually great fun when they are really enjoying themselves and are not trying to act a part. Apparently the same was true of children, these children of Santiago in these cold classrooms. A strike had made the wintertime capital a cold place indeed. The kids blew on their fingers and renewed their gesticulations to the teachers.

"I get it. This is genuine enthusiasm," I finally conceded. "How do you get the sugar coating on the pill?"

We were off! Off in a rapid tour of the place, to give me an idea of the physical contrasts between the "renovated" type of education and the "traditional" kind which had tended throughout the generations to keep preparation for college and university something to be afforded and sought only by the aristocracy. But also we attended enough of the classes to note the type of welding process between community and school which seemed to me particularly well engineered at Gabriela Mistral.

"But why do you think that?"

The question had been about gravity and had been answered correctly by a girl whose quiet demeanor among more vociferous companions made her seem shy. But the teacher had to make sure of the "why" of it.

"So you see," said the young woman teacher after a time, "now you can tell your father why he is right on this question."

Good parent-teacher liaison? Of course. But the thing went further. In a mathematics class there were no such primer academics as how to divide three apples among four people, etc. The subject under discussion was "Convenient Methods of Employing Money," a topic I took to be of more than casual interest in that community, from family head down to the smallest tot. The subject was subdivided into discussions of Chilean currency, the family budget, savings, bank operations, and other uses for the coin of the realm. Once again there was a follow-up reaching out to the family. The school forms were for a typical family budget. Worked out by specialists they indicated percentages of family income to be used for food, insurance, other savings, entertainment, clothes, and the like. In higher grades the mathematics courses continued to keep the student abreast of things interesting to himself and family, such as Chile's financial relation to the rest of the world, her trade, her export resources, and her import needs.

In the social studies the chain of interest between family and school was even more in focus. What, for example, was the relationship of the immediate community to the rest of Santiago? Wherein lay its special economic, commercial, and industrial problems? And from there the class conversation fanned out. Santiago had a relationship to the rest of Chile, Chile a particular role among the other American republics, North America, Europe, and the world. Why their community tended to grow and its prospects as a sector of the capital was, I gathered, always a lively topic.

Finally we were in an English class. Not one word of Spanish was spoken. And again there was no tedium of the "big cat ate the little mouse," or "can you see how blue the sky is?" variety. The room was adorned with colorful maps and the youngsters were enjoying a tour of the English-speaking world. They found

such places as New York, Chicago, Los Angeles, and San Francisco with ease, described the outstanding characteristics of these places and their climates. What these cities meant to Chile and vice versa lightened the conversation. The United States markets for Chilean copper and nitrate drew special interest. It took no imagination to realize that what these children were discussing in class would become supper table conversation at home that night. And finally, by coincidence or design, the teacher asked one young lad to point out America on the map.

He got it right. His pointer drew a large circle around the whole hemisphere.

"Yes, I knew," I winced under Dr. Salas' quizzical eye. "There are kids all over my country who would have planted the pointer on the United States and let it stay there. Some wouldn't have gotten any further afield than Brooklyn. But we're a young country. We'll learn."

Dr. Salas was one of those people who do not seem to have any specific age or any particular specialty. Of medium height and build she talked and walked with a lilt. Springiness was the quality of which she seemed most possessed. Sitting across from her at a desk, or following her around schools and classrooms I always had the sense of being led to sure and interesting discoveries, if I could only keep up. She was kinetic to her finger tips at all moments and in all things. Her activities ran into the multiples. Doctor of Philosophy, Master of Arts, Professor of Education, in her electric personality was packaged a distinctive something I had heard about Chilean women—namely, that they exerted as much or more influence in Chilean national life as women do in the United States, yet do so without the franchise. Irma's job of directing the gradual educational reform in Chile was, for example, one of those high authority posts which women in the United States still find it difficult to obtain.

That her job required lots of fighting ability I was to learn. We had about exhausted general facts at the Gabriela Mistral school. I had all I could use as to its home economics courses, its dramatic club, vocational training, and hobby shops, sports program, and democratic student government system under councilors. I learned that there were eleven other high schools using

the renovation system, and seven more connected through guidance from the cooperative program as between the commission and the Educational Foundation. One-fifth of all Chilean schools had been drawn into the experiment to "democratize" education, spread it out as far and as usefully as possible.

Except for those patricians of large heart, fine mind, and humble spirit who are of themselves a little above and beyond the common run of us mortals, I never had been able to make any concessions to aristocracy. I had never been able to accept it as a class heritage, either in the New World or the Old. Certainly there seemed to be no future for a hereditary aristocratic class in the western hemisphere. But I knew that this point of view was not always accepted either in the United States or some of the other American republics.

"What do you mean by 'traditional' education?" I asked. "What do you have to buck there?"

Again we were off. This time, if anything, the excursion was more exhausting. Professor Irma's black eyes snapped. I had touched off a fuse leading to a long powder train. But we were sitting in her office by then, and at least I had a hard surface on which to write and a comfortable chair to sit in. Irma snapped some orders concerning documents over the telephone, and summoned a secretary to dig out others.

"Eet is complicated," she said. "So I must start with some heestory. I weel speak Spanish, no?"

Afterwards I was glad that Irma spoke in Spanish. Without seeming too much a cub I could ask her to repeat, and in translating on the spot, I got shadings of meaning that made this educational "renovation" program in Chile a very live thing, indeed.

"You see ours is an earthquake country, scholastically and otherwise. There has been a series of scholastic earthquakes in Chile since 1912. That was the year that the Asociación de Educación Nacional (National Education Association) started a public forum on secondary education. It came on the heels of the book, *Our Economic Inferiority; Its Causes and Consequences*, by Francisco Encina. That was a real academic terremoto [earth shock], you can believe me."

I most certainly could believe her when she explained that Dr.

Encina had developed the thesis that the system of secondary education then existing in Chile was the cause of her economic inferiority. He had baldly asserted that the "traditional" system of preparing only the chosen few for college and university had produced a class of people who could only consume, not contribute to the development of the country.

"This book was followed by Luis Galdames' *Intellectual vs. Economic Education*," said Dr. Salas. "Many, many other people joined in the debate. It was, how do you say, 'the hot one.'" She tried our slang to make her point.

There followed rapid back flashes into Chilean educational history. To Chile must go honors for establishing the first public secondary school system in Latin America, in 1813. Its first progressive school, the Academia San Luis, in which a student could study geography, arithmetic, drawing, surveying, and Spanish grammar, as well as Latin and the classics, was established in 1807—three years before Chilean independence.

German educators set up the first university school to prepare secondary school teachers in 1889. And, to jump back to 1854, Domingo Faustino Sarmiento, later to become President of Argentina, founded the first normal school in Chile, following close on the example set by Horace Mann in New York.

Another western hemisphere "first" for Chile was the opening of its Escuela de Artes y Oficios (Trade School) in Santiago in 1849. And in 1886, before many United States or European universities had done so, the National University opened its doors to women.

"But let us return to the earthquakes," said Dr. Salas. I began to suspect that she enjoyed these shaking experiences.

"In 1928 Luis Galdames became director general of secondary education and had a chance to reorganize the system. He applied the idea of high school as a preparation for the economic life of the nation. Only after the fourth or sixth years of these preparatory courses could the student branch into humanistic, scientific, or technical specialties.

"Galdames failed because public opinion was not ready. There were less than two registrants for each of the thirty high schools offering vocational courses.

"But there was one good effect. In 1929 the government made another reform. This time it clearly defined the aims and functions of a new system. They embraced high school guidance for economic life, home life, and all forms of usefulness. The new curriculum was a common program for everybody during secondary school stages with elective subjects thereafter."

"This is what you have now?"

"It is the law under which we work in the gradual renovation program.

"There is an answer here to the charge of Yankee Imperialism which the Communist press likes to throw at the United States," Dr. Salas interjected. "This law was a Chilean law, with its roots deep in the educational soil shaken by those 'terremotos' I have described. The law is dated January 8, 1929. But it lay dormant until the Educational Foundation was asked to cooperate here in 1943. When they came in they looked for the best way to adapt some of these things that have worked in the United States to Chilean customs and the law of the land. They found the ground-work already had been done."

That got us into the broader aspects of the cooperative educational work. As Irma had explained, it had to proceed in an atmosphere still controversial, at times vehemently so among Chilean educators. To avoid friction the Renovation Commission was set up outside the ministry to work out its program.

"The program called for democratization of education, and therefore aroused the opposition of reactionaries. Some elements of the church were at first distrustful. But in the last thirty years this democratic movement, particularly in the smaller cities, would not be denied. Members of Congress are behind it, since it goes hand in hand with the representative form of Government.

"What we are trying to overcome specifically is the maladjustment between high schools and the population. In the 'traditional' high schools more than fifty per cent of the students failed. To preserve those high European cultural standards, those that you think are, how do you say—somewhat phony, the common citizen was made to fail. Only the elite got to the top. The idea was to have some of the best doctors, writers, jurists in the world rather than to elevate the masses. Traditionally some Chileans have thought they could contribute more to culture with a few in-

tellectuals than by mass education. So the idea of giving more education to more people has been thought radical."

"How do you buck it?"

"Oh, we do everything we can. But the most useful thing is to go right to the heart of the main criticisms and answer them." She outlined them:

1. Introduction of vocational education in high schools leaves no room for the humanistic approach.

Answer: Vocationalism is part of humanism. How better to prepare for life than to give training with the tools and in the subject matter of normal workaday life!

2. The high schools will be in competition with the vocational schools already established.

Answer: The first three years of high school under the system of renovation prepares for vocational schools rather than competes with them. In these first three years effort is made to give the student a basis for all specialized training and time to discover and develop special aptitudes.

3. The United States influence is de-nationalizing Chilean education. (Favorite charge of the dyed-in-the-wool reactionary and the Communist extremist.)

Answer: Functional education which meets community demands in Chile is far more "national" than is the "traditional" type based on French, Spanish, and German influences. The functional embraces Chilean regions, their folklore, communications, journalism, continental American literature, plus some great books on the mother countries. The whole program is organized along national or continental starting points, though it does not neglect world literature or the mother countries.

"You can see from what I have said that we Chilenos are not backward, no?" Dr. Salas took up the thread. "But it is true that cooperation is a great catalysis. That decree of 1929 . . . all those years inactive. I sometimes think that if the war had not brought the need for inter-American cooperation to attention we might have had to wait another ten or twenty years to get these democratic educational programs started."

"One other thing to check back on, Doctor. You spoke of the German educational influence. Was it good or bad?"

"In many ways, good. They had precision and method. In 1886

a hundred of them brought in the German gymnasium idea [the four year high school preparation for college common in some parts of the United States]. They had discipline and organization.

"But they failed to develop Chilean ideals. They had the Prussian concept of order and discipline. Their influence was great and much of it good, but it gave our educational system all the outward aspects of the German system."

"That would be like teaching Chileans the mental goosetep without helping them to plumb their own intellectual resources, wouldn't it?"

"Yes. And yet," she said, with a trace of irony, "no one ever accused them of imperialism."

"What's the perspective for the future?"

Dr. Salas folded her hands over her desk. For a few seconds she appeared lost in a wistful, almost sad recollection. Then she smiled. "My father wrote the decree of 1929 when he was counselor of the ministry of education," she recalled. "He never saw it in operation, but he used to say 'all the science of life consists in knowing how to wait.' Maybe I will have to wait, as he did, to see the development of education in Chile as we wish it, as the people of Chile wish it."

I could not picture Dr. Irma in any submissive, or even passive role. But that she would know how to wait I could not gainsay. So would those vibrant women of Chile. So would the young male and female teachers of Chile, their students, the families of the students. Wait for the time when Chile, now hindered by the sad state of world markets, could rise to a more commanding position in world economy. Wait with one foot planted on programs of better health and strength for her highly individualistic people; with the other solid on a platform of popular education.

If Irma was the prototype of the new spirit of Chile, I felt this country could wait out any temporary delay to progress—wait with ammunition ready.

CONCLUSION

BACK in Washington after seven months of travel to and into many of the other American republics, I sought to define the significance of what I had observed.

I concluded that I had seen the expression of stimulated appetites in whole sectors of populations for better standards of life, better futures for the children and grandchildren of this generation.

Simón Bolívar, the great liberator of South America, once said:

"We shall not see, nor the generation which follows us, the triumph of the America we are building."

Where I went, the spirit and attitude of the people indicated that they thought it was time for this triumph to take form.

In this book I have described aspects of the cooperative programs in only six of the other American republics. But in all of the seventeen I visited—from Mexico and Central America to Panama, Colombia and Ecuador; in the Caribbean, the Amazon, the Pampas and the Andes—the slightest contact with these programs brought the unmistakable impact of deep popular restlessness, an obsession for building. Exposed to it repeatedly, I came to regard it as an almost desperate urge to consolidate those social and economic gains which were begun in the wartime enthusiasm of inter-American good neighborliness, before cooperative action for a healthier and wealthier hemisphere should become completely bogged down in postwar lethargy.

The next step was to appraise the programs themselves in rela-

tion to this stirring within the masses of the other republics. I came finally to regard the continued demand for them as a result, not the cause, of this ever-widening desire for something better in the democratic way of life. Not without bitter comment, but at least with recognition of the fact that wartime programs requiring heavy expenditures by the United States could not go on indefinitely, the other republics had accepted the termination and consequent economic dislocations of Lend Lease, the Foreign Economic Administration, the Rubber Development Corporation, even the Office of the Coordinator of Inter-American Affairs. But when it came to discussing the future of the Institute of Inter-American Affairs and the Inter-American Educational Foundation, Inc., and their work in basic, or human economy, nowhere did I find willingness to put a time limit on their usefulness. Their programs, I was told on all sides, represented some of the substance of the democracy which was our common cause during the war; a cause for which most of the people of the Americas were willing to work or fight. Premature termination of them for any reason would leave unfulfilled the promises of better living standards and conditions which masses of the people had begun to regard as their right. Obviously, they represented a contact with the United States which the people of the other republics were loath to relinquish, even as they pursued a more general quest for better life in the postwar era.

Equally apparent was the fact that great numbers of Latin Americans no longer were content to restrict their definitions of democracy to the mere privilege of voting. There was an awakened demand for those decencies of living and their stabilizing effect on national life which many North Americans take for granted. Hence the popular support for the cooperative service water supply systems, the ready appreciation for the benefits of the community health center, the willing cooperation with visiting nurses and sanitary inspectors. In the field of education I noted exceptional enthusiasm on the part of children for learning to do useful things, and on occasion was able to trace the sustaining force for this enthusiasm back to homes where the knowledge to do useful things was all too limited. In food supply I remembered as most typical and most heartening for the suc-

responsible to the ministries or departments overseeing their localized work as well as to the Institute, and hence the Secretary of State, back in Washington. Their work went many steps beyond the hackneyed formulation of surveys and critical reports. These were just preliminaries. Servicio men were, and are, expected to put recommended projects into effect, wisely administer the joint funds considered necessary for any given project, correct working errors or initial policy mistakes—in a word, see the job through.

It was no wonder to me that diplomats and technicians of our neighboring nations, some of whom I had known since boyhood, quickened at any mention of the servicio projects. As long as I could remember I had seen these same people shrug dejectedly or become flippant when the reports of "experts" were brought into discussion. To some of them reports by United States specialists on their particular countries all too often meant nothing but artistic conceptions of glorious destinies waiting only upon an inconceivable miracle to give them the economic head-start already enjoyed by the United States. But when they saw United States specialists in their countries actually putting their backs and reputations into carrying out recommended work for the correction of criticized ills, they forgot to shrug. They pitched in joyfully.

Giving each other a leg up. Bearing a hand. Sweating out the basic spadework of proving that good health and properly nourished human strength in one country can make more secure the good living of all. Standing definitely for the type of democratic cooperation which can give real meaning to the words "all for one and one for all." That was the ever present spirit of the inter-American servicio programs as I observed them in Amazon jungle or in Andean plateau, in the malarial zones of the tropics and those that were more tubercular as well as more temperate in climate. Whatever the individual interpretation that might be placed on these programs, they crystallized and put into operation a principle not often enough alluded to or demonstrated—that United States democracy has little to fear and everything to gain from strong democracies to the south.

Upon my return to Washington I was asked, of course, how

effective the cooperative programs might be in offsetting the spread of communist doctrine in the other American republics. The answer required some use of history.

The cooperative services were the direct application of a resolution adopted at the Rio de Janeiro conference of American ministers of Foreign Affairs held just after Pearl Harbor. There the statesmen of the Americas resolved that multi-lateral or bi-lateral cooperation in public health and nutrition should be established as a hemisphere defense line to withstand the shock of global war. Nelson Rockefeller, Major General George C. Dunham of the medical corps, and the technical and political leaders of the other republics set about the application of this high policy vigorously. At the same time they planned ahead so effectively that even the most dissident could find little grounds for belittling the *servicio* system as just another evidence of wartime expediency.

In a short time the programs became positive implements of democracy all through the western hemisphere. In many of the republics the direct benefits for the so-called common man were hailed as tangible evidences of inter-American democracy at work.

Thus, during wartime, these implements of democracy became affirmative weapons against the Axis powers with their hopeful fifth columns. They did much to convince the other republics that the United States wanted their people to be healthy and able to weld strong nations to the south.

As implements "for" democracy the "*servicios*" never assumed the role of working against anything of an internal political nature in the other American republics. The responsibility for developing common inter-American political attitudes and the machinery for employing joint measures against foreign encroachments in the hemisphere were left to the Pan American Union—that parent body of all inter-American movements with its history of success in promoting and developing inter-American understanding.

With the latter point in mind it seemed reasonable to suppose, however, that if the cooperative programs with their day-by-day application of democratic principles helped in any way to set back Nazism in the hemisphere—and I was offered continual proof that they had—then the United States should seek to improve

and amplify them for the affirmative part they might play in strengthening western hemisphere democracy against any new encroachment of overseas or fifth-column origin. From what I saw they had already proved that one of the best ways to resist political dogma from outside the hemisphere was to work for wider enjoyment of the benefits of democracy within the hemisphere.

The health and sanitation, food supply, and educational programs, with some wartime work in transportation, even at the peak of their spending cycle represented, of course, only piloting operations in a task as huge as the lower half of the hemisphere itself. During the whole period 1943 to 1948 they cost the United States less than \$100,000,000. Were it not for the fact that the other republics so quickly caught them up and began to take them over as permanent implements of national economy, they would have represented nothing but some public weal techniques of United States democracy casually applied. For they would have done, and unless they are completed without haste, they will do, little more than suggest the benefits of organized attack on the problem of better living for all, before the United States withdraws its experienced technicians from this cooperative field. That, according to many people with whom I talked, would leave ground ideally prepared for the seeding activities of communism or any other fifth column aimed at undermining western hemisphere confidence in democracy. Technicians and statesmen were quite clear on this point. To them, half-hearted or inconclusive measures adopted in the name of democracy to elevate living standards among the masses were almost as much to be deplored as the ignorance, disease, and poverty which have been popularly accepted as favored breeding grounds for anti-democratic doctrine. For where appetites for better living have been aroused and then denied, where democratic principles have been proclaimed and then vitiated by inactivity, where imaginations have been excited but no substance given to democracy—there disillusion can make people the more susceptible to anti-democratic dogma. It is like plowing and seeding a field and then neglecting to cultivate. The weeds will take over and choke out the useful crop.

During and immediately following the war more than fifty programs were being conducted in Latin America by the cooperative corporations. Many have been taken over by the other republics, and others have been liquidated as being only of wartime value.

That tells only part of the story. The other republics built up their commitments for this type of cooperation to a total exceeding \$30,000,000 in health and sanitation alone for the 1943-1948 period. When the Institute somewhat timorously asked Congress for \$5,000,000 a year to continue the programs after 1948 it did so with the assurance of the other republics that they could and would more than match or even double this commitment. A breakdown of the programs country by country would indicate good faith and ability to produce in this regard. Several republics had already extended specific programs at the rate of two, and six, even ten to one for every dollar put up by the United States.

These were people who really wanted to help themselves! And in the *servicio* system they could do so with dignity.

As I observed the process, the people of any given republic quickly absorbed a sense of ownership and hence responsibility for the success of the cooperative services. With this went, as our technicians and newspapermen pointed out to me in most of the places I visited, an awareness by the people of the other republics that the assistance in getting these services started came from all of the people of the United States, not from any one philanthropic source. Thus the programs could inspire good feeling toward the people of the United States unmitigated by any sense of obligation to private enterprise. Quite naturally people of the other American republics accepted the postulate that our people would not be helping them along the pathway to better productive and consuming power unless we ourselves expected to benefit in the friendly exchange.

That brought me inevitably to a consideration of material factors. Just what might these benefits be in terms of dollars? In the public information files of the Institute there is a fine assortment of statistical matter showing that money it has spent in cooperative programs has been returned, or in the natural course of events will be returned to the United States in the form of equipment

purchases, many times over. Both Senate and House committees responsible for legislation affecting foreign affairs have this information. It seems unnecessary to go into this detail here. Obviously no activity in applying United States techniques to agriculture, public health and sanitary engineering, and educational method could fail to create demands for United States farm machinery, drugs, hospital and sanitary equipment, educational supplies and books; demands susceptible to expansion as unpredictable as the aroused and vigorous appetite for better living now in evidence all through the American republics. More to the point, from a material point of view, is the fact that the cooperative programs seem to have tapped a well of understanding and thereby given the people of the United States and the other American republics a foothold for good faith. Whether or not industry and business follow the practices of the cooperative services in selecting men and women to do their jobs in inter-American affairs without recourse to the patronizing attitude; whether they insist, and many already so insist, that their representatives are in the other American republics to learn as well as to teach and to trade; whether they regard technical progress as a common heritage to be employed without disparagement of local custom—all this remains to be seen. The pattern is there!

And whether or not the lessons in genuine community cooperation can be absorbed by nations elsewhere in the world; whether or not these nations wish to study them and apply them, an acceptable system of helping people to help themselves has been born in America. And it works!

As to the future of the cooperative programs themselves, The Institute of Inter-American Affairs and The Inter-American Educational Foundation, Inc.—now one entity—originally were supposed to go into liquidation at the end of 1948. In the summer of 1947 Congress granted a breathing spell of two and a half years beyond 1948, though the request was for five years. Still later exhaustive study by the Department of State prompted the thought that more time and more money should be sought for these programs.

Relatively this is all detail. What would seem important, from the broader hemispheric point of view, is that the essence of the

cooperative services be preserved far beyond 1948 or 1950, or any arbitrary termination date; that their pattern be kept freshly tailored and ready for application or adaptation to future hemispheric problems.

This presupposes that the word "cooperation" in the western hemisphere signifies opportunity rather than obligation, or uncompensated financial drain for the United States. That premise, along with the one which historically has linked our tenure of world power to the destinies of the other American republics, will be supported by responsible men and women wherever there is understanding and appreciation of the Pan-American system.

Meanwhile, common enemies still face us. Much remains to be done. With airplanes shuttling back and forth across our dividing seas and mountains our national health frontiers still may be hidden in deep Andean valley, or neglected Caribbean "ciénaga" or swamp. So long as there are Quechua and Aymara Indians living largely off roots and watercress, the latter gathered in ditches jointly used for irrigation and the disposal of human and animal waste, we may be sure that our nutritional problems in the hemisphere remain partially unsolved. So long as there is a whisper of doubt as to the right of any child born in the hemisphere to early schooling opportunities, or there is any laggardness in employing needed joint measures and money to give him this guarantee, we will not have opened democracy's doors widely enough in our own hemisphere. And so long as the foods of rich valleys in many neighboring republics rot on the ground, or are consumed by insects because no adequate means of transportation to market exists, or because there are insufficient modern storage facilities, or farm credit systems for organized crop saving, we in the United States cannot say that our technical cooperation has been employed to the full in solving hemispheric food problems, much less those of the starving mother countries.

These are the things that make peoples weak. They challenge the axiomatic in our western civilization—the postulate that our national and international strength comes from the strength of the people. Happily the "servicio" system, as devised by Rockefeller and Dunham and their thoughtful colleagues in the other American republics, survived three postwar years of hypercritical

picking and pecking by those among us who tend to see hemispheric cooperation as a wartime necessity rather than a permanent desirability. It is no secret that the servicio system with its apolitical faculty of bringing the peoples of nations into harmonious working relations is being studied by thoughtful people in Greece and India and elsewhere. It has received the staunch support of all those United States envoys in Latin America who have been able to study its operations. Daily, it has gained favor in cautious Washington diplomatic circles as a permanent implement of United States foreign policy. It should, because it works on basic levels for the basic principles of democracy. It is designed and employed to make the people strong.

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